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BOROUGH OF BLYTH.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1946.

A.G. NEWELL, M.D.; C.M.; L.M.; D.P.H.

Public Health Department,
"Dinsdale"
Marine Terrace,
BLYTH,
Northumberland.

February 1947.

CONTENTS.

PAGE.
Summary and Remarks on Statistics 1 & 2
Table (Causes and Age Distribution of Deaths) 3
Statistics and Social Conditions of the Area.(Section A). 4
Infectious Diseases - Deaths "
Births and Deaths "
Causes of Death "

Table (Cancer Deaths and Age Groups). 5
Laboratory Facilities "
General Provision of Health Services 6
Infectious Diseases 7

Diphtheria Immunisation 8 & 9

Immunity to Tuberculosis 10

Tuberculosis Tables 11 & 12

Public Health under the Health Services Act, 1946 13
Infectious Diseases Table.(Notifications and Age Distribution). 14
Infectious Diseases Graph for 7 years 15

SECTION B.

Infant Mortality, Health Visitors Services 16

Maternity Home 17 & 18
Minor Ailments Clinic (Treatment of Infants and Pre-School Children). " " "
Toddlers Clinic 19
Vitamin Product Scheme. Child Life Protection 20
Maternity Services "

Health Visitors Reports on Confinements 21

Nutrition 22

Population 23

Delinquency 24,25, & 26
Diagramatic Representation.(Bactericidal Rays in the Ultra-Violet Region). 27

SECTION C.

Ante-Natal Clinic 28
Maternal Mortality "

Summary of Births at Homes and Hospitals 29

Premature Infants (Reported on). 30

Still-births. 31
Neo-Natal Deaths "
Live and Still-Births "

Toxaemia Cases among Maternity Cases 32

Premature Babies "
Transferable Deaths for Quarter ended 31st.Dec. 1946 "

Blood Pressure in Pregnancy 33

The Blood Group Rh. Factor 34 & 35

Painless Midwifery - Views of 90 Mothers 36 & 37
Ante-Natal Clinic and Scabies 38

SECTION D

Schedule of Temporary and Permanent Houses 39

Slum Clearance Areas 40

SECTION E

Sanitary Department - Complaints, Visits, Etc. 41

Pasteurisation by H.T.S.T.Process and Methylene Blue Test 42 & 43
Beulah House - Diagrams 44

MEMBERS OF THE HEALTH COMMITTEE:-

Chairman - Alderman H. Donnachie.

Vice Chairman - Alderman J. Mitchell.

The Mayor,
Alderman Donnachie,
" Mitchell,
" Murdy,
Councillor Allen,
" Allison,
" Breadin,
" Carr,
" Crate,
" Curry,
Councillor Foy,
" Hamm,
" Kay,
" Kinsman,
" Raffell,
" Ridley,
" Ryder,
" Searle,
" Sculsby,
" Summers,
" Waters.

MEMBERS OF THE MATERNITY AND CHILD WELFARE COMMITTEE:-

Chairman - Councillor Mrs. M.L. Summers.

Vice Chairman - Councillor Mrs. J.G. Allison.

Chairman, Vice-Chairman and Members of the Health Committee.

Co-opted Members:-

Mrs. Coleman.
Mrs. Darling,
Mrs. Henson,
Mrs. Levy,
Mrs. Mitchell,
Mrs. Patience,
Mrs. Routledge,
Mrs. Robinson,
Mrs. Searle,
Mrs. Wilkinson.

STAFF OF THE PUBLIC HEALTH AND MATERNITY AND CHILD WELFARE DEPARTMENTS - 1946.

Medical Officer of Health Medical Officer, M.& C.W. Authority School Medical Officer Port Medical Officer	(A.G. NEWELL, M.D. ; C.M. ; (L.M. ; D.P.H. (J. STOKOE, M.D. ; B.S. ; B.hy. ; (D.P.H. - to 1st. Sept. 1946.
Ophthalmic Surgeon	A.T. PATERSON, M.D. ; F.R.C.S. (Edin.) ; D.P.H.
Women's Advisory Clinic	MRS. D. SINTON, M.B. ; Ch.B.
Ante-Natal Clinic	Medical Officer provided by the County Council.
Obstetric Emergency Service	(PROFESSOR E.F. MURRAY, (M.D. ;F.R.C.S. ; F.R.C.O.G. (H.H. EVERS, (M.B. ; M.S. ; F.R.C.S. ; (F.R.C.O.G. (F. STABLER, M.D. ;F.R.C.S. ; (M.R.C.O.G. (W. HUNTER, M.D. ; B.S. ; (M.R.C.O.G. (MR. ARTHUR, F.R.C.S. ; (M.R.C.O.G.
Dental Surgeon	H.O.J. BEDGOOD, L.D.S.
Senior Sanitary Inspector	F.B. HARTLEY, M.S.I.A. - to 30th. Sept. 1946.
Deputy Senior Sanitary Inspector	J.G. SIMPSON, M.S.I.A.
Health Visitors	(MISS R.M. FINLAY, S.R.N. ; (S.C.M. (MISS D. ROBSON, S.R.N. ; (S.C.M. (MISS M. MURRAY, S.R.N. ; (S.C.M.
Temporary Shorthand Typists	MRS. M. MORTON. MISS S. CLARK.
Clerk	N.F. GODFREY, (on study leave.)
Temporary Overcrowding Clerks.	(T.G. MORALEE (C. FELLOWS - up to 5th.Oct. 1946. (T. WALTON - up to 5th.Oct. 1946.

26th.February, 1947.

BOROUGH OF BLYTH.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1946.

Your Worship, Ladies and Gentlemen,

I have the honour to present to you my report on the Public Health and Sanitary conditions in the Borough of Blyth during the year 1946.

A Summary of the main Public Health aspects, comments, and suggestions will be found on the first two pages.

The various statistical tables which have been grouped under each section will provide interesting figures on the main diseases, housing conditions, and Sanitary matters.

I feel grateful for the support given in my endeavours for the benefit of the Public.

To my brother officers, I offer my thanks in appreciation of their co-operation, as well as to all others who have helped me. I also appreciate the help of the lady helpers who voluntarily gave their time at the Welfare Clinic.

I remain,

Your Worship, Ladies and Gentlemen,

Your Obedient Servant,

A.G. JEWELL,

Medical Officer of Health.

To the Mayor, Aldermen,
and Councillors of the
Borough of Blyth.

SUMMARY AND REMARKS ON STATISTICS.

1. Birth Rate: There were 741 births during the year. Of these 271 were notified from Maternity Homes representing 36.6% of the total births. There were 36 illegitimate children, being 4.6% of the total births. There were five more male children over the total of 368 females. There were 17 "still-births" among the legitimate births and only one among the illegitimate ones. 11.7% of the total births took place in the month of May. (See Page 29).

2. Premature Babies: There were 24 cases of premature births with 27 infants (4cases of twins). There were 9 deaths within one month, and 2 between 5 weeks to 3 months. This means 40.7% of the 27 infants died within 3 months.(See Page 32).

3. Total Deaths during the year was 395 (224 males and 171 females). Death Rate is about the same as last year, 12.7 per 1,000 population. 193 (or 48%) of all deaths were in persons of 65 years or over. There were 53 more deaths among females. The chief causes of death were, Brain diseases 58; Heart & Circulatory diseases are 138; Cancer 59; Tuberculosis 38; in all of which deaths were greater among the males, except Brain diseases in which there were 16 more deaths among females than among males.
The Infantile Mortality rate for the year is 64.7 per 1,000 Live Births (against 61.8 for 1945). There were 31 males and 17 females. Age distribution shown on Page 4. (With Quarterly Returns received after stencilling Page 4, the infantile mortality comes to 68.8 per 1,000 Live Births).

4. Cancer: Deaths from Cancer totalled 59 of which 51 were among those over 66 years of age. Most of the cases (12) were of the stomach and duodenum. (See Page 5).

5. Infectious Diseases: (a) We had an epidemic of measles causing 641 cases (began late November), against 67 in 1945. Epidemics of measles occur every other year. The previous records of them are 1944 = 743 cases (15th.June); 1942 = 912 cases (26th.June); and 1940 = 751 cases (6th.May). (Dates in brackets represent practically date of outbreak).

(b) Diphtheria: There were 51 cases against 108 in 1945 - a considerable improvement. (Table on Page 7). The table shows a definite drop in the incidence of the disease since 1941 as a result of immunisation. Taking the estimated population of age group 0 to 4 years inclusive, which is 2,820, we have immunised 1,658 in this group leaving a susceptible number in this group of 1,162. Of the school children population ages 5 to 14 inclusive, we have the figure of 5,270 of which 4,625 have been immunised. This leaves 645 un-immunised. It would appear there is more objection to immunisation on the part of fathers than from mothers of those children of five years and under. This is to be regretted. At the same time it must be remembered that some of the school children may have lost their protection and become susceptible. This seems to happen between 3 and 5 years. This can only be proved by the Schick Test. It behoves every one who desires to eliminate this dreaded disease to use their influence with parents to get their young child immunised soon after nine months. During the year I have immunised 422 children under 5 years and 45 over that age. I am grateful to the general practitioners who have willingly come with the scheme and during this year have immunised 93 children between them. (See Page 9).

(c) Pneumonia: There was a rise in the number of cases, the total being 58 against 35 in 1945.
Whooping Cough accounted for 67 cases against 79 last year.

(d) Tuberculosis: Total cases were 62 of which 55 were pulmonary cases (against 22 cases with 18 pulmonary type in 1945). The total deaths were 38 being 10.4% of the total registered deaths (395) - the corresponding figure for England & Wales being 5.5%. A note on prevention is added to provide further interest to this subject.
(See Pages 10, 11, and 12).

6. Clinics: The total attendances at all the various clinics was 8,882 (See Page 28). The future of these clinics remains to be determined according to how the new Health Act is going to be administered. A brief note on this is given. (And consult diagram at end).

7. Ante-Natal Clinic: There were 100 sessions in the year with an average attendance of 33 per session. The total new patients seen were 649; re-visits 2,719. (See Page 36).

8. Post-Natal Clinic was conducted by Dr. Dorothea W. Stinton. There were 21 sessions with a total of 196 attendances. (See Page 38).

9. Maternity Section: (See Table on Page 29). Of 741 maternity cases 271 were attended to at a Maternity Home or Hospital, this giving 36.5%, and of this number 115 went to Dilston Maternity Home. The total cost to the rate-payers for 271 cases was £2,258. There were 12 cases of Toxaemia. There were 37 illegitimate births (one a "stillbirth"). There is a distinct need for analgesia as expressed by those confined, from a questionnaire I put among a limited number (See Page 36). For the prevention of infantile deaths Blood samples are taken at the clinic and examined at Newcastle to determine if the women are susceptible to the Rh. factor. In order to explain this statement I have tried to put into non-technical language a general survey of the subject and trust it proves interesting. Blood Pressures are taken fortnightly and the relation of this is the occasion of a brief note.

10. Blyth and District Diamond Jubilee Nursing Association: During the year April 1st. 1945, to March 31st. 1946, Nurses have attended 118 Maternity cases, 173 Midwifery, 170 Medical, 154 Surgical, 50 Chronic, 3,293 Ante-Natal Visits, 198 nights on duty. Total number of visits 15,069; 246 patients have been conveyed to hospital. Nurses continue to accompany patients to Dilston Hall. Nurses continue to attend the Clinic at Beulah House 3 afternoons each week; this work has grown and serves a most useful purpose.

11. Health Visitors Work: (See Tables on Pages 16 and 21). These show a very creditable performance of the work done. A little short of 100 visits were paid in two months (May and October) in spite of the call on them for attendances at the Infant Welfare and Toddlers Clinic and the taking of blood samples at the Maternity Clinic. The need for an extra Health Visitor is great.
Delinquency acts have been noticeable and so I have briefly reviewed the situation.

12. Housing: The number of applications for Council Houses to the 31st. December, 1946, was 5,207. (See Pages 39 and 40). Owing to shortage of staff I have not been able to give all the details of Housing as done previously.

13. Sanitary Department: I draw your attention to the new plant (H.T.S.T. Process) for Pasteurisation at the Co-operative Dairy which will be worth a visit. I give a brief outline on the subject and on the Methylene Blue Test which is so often referred to.
Complaints as to Nuisances etc.: (See Table on Page 41). There was a total of 1,034 during the year. No less than 293 concerned house defects as was to be expected. There was an increase in the work at the slaughterhouse.
I would like to record the excellent work put in by Mr. Simpson since he has been on his own. The good work of Mr. Pringle demands mentioning.

14. Venereal Diseases: V.D. Clinic at Blyth. Treated for the first time during the year = 191 cases. Also treated those dealt with for first time at other centres = 64 cases. Total = 255 cases.

15. Beulah House Scheme under consideration. A suggested plan is shown at the end of the report. Beulah House (a) Plans have been submitted for utilisation of this building, with the addition of Hutments, for a Maternity Home. Alternatively it could be utilised as (b) A Home for emergency case and for all clinics or (c) A Health Centre and all clinics. For (a) it would be better to have one centre for all clinics on an extended scale plus a day nursery as shown in the Rotunda suggested.

16. Pathological Reports: I have to thank Dr. Messer for the prompt attention and valuable help given to me in this matter.

DEATHS (All causes) and Age Distribution 1946

Registrars Weekly Returns.

	0-1		1-2		2-5		5-15		15-20		20-25		25-35		35-45		45-55		55-65		65-75		Over 75		Age Unknown		Totals		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Male	Female	TOTAL.
Heart Disease	1	-	-	-	-	-	1	1	-	-	-	1	-	-	4	3	9	1	15	9	20	20	29	24	-	-	79	59	138
Brain "	2	2	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	4	6	7	5	16	6	7	-	-	21	37	58
Lung "	6	3	-	-	-	-	-	1	-	-	-	-	-	-	-	1	3	-	1	-	-	1	1	-	-	-	11	6	17
Kidney "	-	1	-	-	-	1	-	1	-	-	-	-	2	1	-	-	-	-	-	-	1	2	1	-	-	-	4	6	10
Bowel "	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	1	-	3	1	4
Operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	2
Zymotic Diseases.																													
(a) Diphtheria	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
(b) Pneumonia	3	4	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	9	4	13
Acute Enteritis	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	2	5
Cancer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	5	5	7	3	15	10	2	6	-	-	32	27	59
Violence.																													
(a) Suicide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	2
(b) Road Accidents	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1
(c) Other Causes.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	2	-	1	-	-	-	1	-	7	-	7
Tuberculosis (Pul.)	-	-	-	-	1	-	-	2	4	1	3	5	4	2	2	1	5	-	3	-	-	-	-	-	-	-	22	11	33
" (Non-Pul.)	2	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5
Senility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	6	-	-	5	6	11
Influenza	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1
Prematurity	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	9
Malignant Growths	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1	-	-	-	1	-	-	-	4	-	4
Other Diseases	7	3	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	2	1	-	-	-	-	-	8	7	15
	31	17	2	-	2	1	2	6	4	2	4	6	8	4	14	9	27	11	37	21	47	50	44	44	2	-	224	171	395

SECTION A.

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

AREA:- No change in the Borough Area took place in 1946, and the acreage remains as formerly at 6,487.

POPULATION:- (Registrar-General's estimate for year 1946) 31,080.

No. OF INHABITED HOUSES i.e. HOLDINGS:- 9,372

RATEABLE VALUE:-.........£169,344.

SUM REPRESENTED BY A PENNY RATE:- ....£648.

EXTRACTS FROM VITAL STATISTICS:-

		Against 1945	
The Birth Rate per 1,000 population	23.8	20.5	+
" Death " " " "	12.7	12.0	+
" Infant Mortality Rate per 1,000 Live Births	64.7	61.8	+
" Neo-Natal Mortality Rate per 1,000 Live Births (dying in four weeks).	22.9	22.8	
" Still Birth Rate per 1,000 Live & Still Births	23.7	20.7	+
" Tuberculosis Death Rate (per 1000 population)	1.2	0.78	+
" Maternal Mortality	Nil.	3.1	-

INFECTIOUS DISEASES.	FATALITY RATE.	CASE MORTALITY.
Diphtheria	.03 per 1,000 population.	1.9
Pneumonia	.41 per 1,000 population.	22.4

	1943	1944	1945	1946
Number of Births (Live)	604	719	627	741
" " Deaths	403	377	367	395
No. of Births in excess of Deaths.	201	342	260	346

The principle causes of Infant Deaths were as follows:-

Pneumonia...................	7
Bronchitis....................	9
Convulsions..................	3
Prematurity..................	9
Bowel.........................	1
Tubercular Meningitis...........	2
Acute Gastric Enteritis..........	4
Congenital....................	4
Kidney (Uraemia)...............	1
Marasmus.....................	1
Multiple Foetal Deformities......	1
Heart.........................	1
Brain.........................	4
Spina bifida..................	1
	48

Neo-Natal Deaths (Infants who died within 4 weeks included in the 48) = 17.

The Principle causes of Death (of all ages) were as follows:-

	Males	Females	Total	Against 1945
Heart & Circulatory	79	59	138	+
Brain Disease	21	37	58	+
Lung "	11	6	17	-
Kidney	4	6	10	+
Bowel	3	1	4	+
Operation	1	1	2	+
Zymotic Diseases. (a) Diphtheria 1) (b) Pneumonia 13)	9	5	14	-

The principle causes of Death (of all ages) were as follows:-(continued)

Zymotic Diseases(continued)	Male	Female	Total	Against 1945
Acute Enteritis	3	2	5	
Cancer	32	27	59	+
Violence				
(a) Suicide 2)				
(b) Road Accidents 1)				
(c) Other Causes 7)	10	-	10	-
Tuberculosis.				
Respiratory	22	11	33	+
Non-Respiratory	5	-	5	+
Senility	5	6	11	+
Influenza	-	1	1	
Prematurity	7	2	9	
Malignant growth	4	-	4	+
Other causes	8	7	15	-
Totals	224	171	395	+

193 of all deaths were in persons 65 years and over = 48%
48 " " " " among infants under 1 year = 12%

CANCER DEATHS 1946 - Situation of Disease.
Age Group in Years.

SITE		Under 36 years	36 to 45	46 to 55	56 to 65	66 to 75	Over 75 years	Males	Females	Total
Buccal) Cavity)	Face	-	-	-	-	2	-	1	1	2
Digestive Tract	(Rectum	-	-	-	1	4	1	4	2	6
	(Stomach&Duodenum	-	2	-	4	4	2	9	3	12
	(Colon& Caecum	-	-	2	3	4	-	5	4	9
	(Pancreas	-	-	-	1	1	-	2	-	2
	(Liver	-	-	1	2	2	-	2	3	5
Respiratory System	(Lung	-	1	1	-	2	-	2	2	4
	(Bronchi	-	-	2	1	1	1	5	-	5
Genito-Urinary System	(Bladder	-	-	-	-	1	1	1	1	2
	(Uterus	-	-	2	1	1	2	-	6	6
Other Organs	(Breast	-	-	1	-	1	1	-	3	3
	(Cervical Glands	-	2	-	-	-	-	1	1	2
	(Peritoneum	-	-	1	-	-	-	-	1	1
Totals		-	5	10	13	23	8	32	27	59

Laboratory Facilities.

Arrangements continue as in previous years.

Bacteriological (County Council Laboratory, Newburn).

A. Pathological.

(1) Throat, Nose and Ear Swabs.

					Totals.
Corynebacterium	Diphtheria:	Present	57		
"	"	not found	641	-	698
Virulent G	"	present	19		
" "	"	not found	9		
" "	"	inconclusive	1	-	29

Throat, Nose and Ear Swabs (continued).

				Totals.
Haemolytic Streptococci	present	7		
" "	not found	17	-	24
Vincents	present	1	-	1
(2) Sputum.				
B. Tuberculosis	present	59		
" "	not found	189		
" "	doubtful	1		
" "	insufficient material	2	-	251
(3) Pleural Fluid(Tuberculosis)	not found	1	-	1
(4) Blood (Widal)	no reaction	1		
B. para typhosus	B. present	1	-	2
(5) Faeces (Pathogenic)				
B. para typhosus	isolated	1		
No pathogenic organisms found		5	-	6
(6) Urine (Organisms).				
Growth of B Coli & Staphylococci		1	-	1
(7) Tests re B.diphtheria on specimens of Lemonade, Ice cream and used dringing glass.	not found	3	-	3
B. Milk, Water Etc.				
(1) Water Samples (Various sources)				42
(2) Milk Samples				
(a) For B. Tuberculosis		126		
" " "	(Samples not analysed through lack of cavies)	18		
" " "	Result inconclusive Animals died	2	-	146
(b) For Methylene Blue		100		
(c) Pasteurised Milk (Methylene Blue Test)		67		
" " Phosphatase "		3		
(d) Phosphatase Test		23		
(e) Sterility (Milk Bottles)		8	-	201
Composite Bulk Samples.				
(a) Methylene Blue		3	-	3

General Provision of Health Services.

Blyth and District Nursing Association.

	Cases.	B.B.A.	Unavoidable.
Nurse Storey	61	10	8
" Lough	49	6	6
" Allison	40	6	6
" Menzies	28	3	2
	178	25	22

	Blyth	New Delaval.	Bebside.
Number of Nurses.	7	1	1
Number of Maternity Cases (with doctors)	113	31	3
" " Midwifery Cases by Midwives	262	35	32
" " Medical cases	160	41	10
" " Surgical Cases	158	53	40
" " Chronic Cases	76	-	3
Total Cases.	776	161	89
Ante-Natal Visits including those seen at Clinic	4148	424	294
Post-Natal "	248	69	158
Visits to Maternity Cases	5599	1286	61
" " Surgical Cases	1496	888	448
" " Chronic Cases	4035	48	413
" " Medical Cases	1639	796	217
Total Visits	17,165	3511	1591

CANCER.

CANCER RESEARCH. - is forging ahead. There are many agents around us - and many physical and chemical in industry - which are capable of causing cancer new growths (such agencies are termed carcenogenic). Even our sunlight is such an agent and the reason why we are not affected by it is that it's action (as with most such agents) is weak. Other factors are necessary to produce the Neoplasm. Experiments (by Bittner) have shown that newborn mice taken from the mother mice of strains very liable to cancer, when suckled by females of strains not liable to cancer, are rendered free of cancer. Conversely the tendency to cancer can be conferred upon mice of strains not having the liability. Most evidence points a Virus as a cause but that ordinarily it is harmless and only causes the growth by some other sellular condition (ageing, injury, etc.,). Further it has now been proved that they are not independent growths since prostatic cancers can disappear after removal of the testicles. This opens a new field of research.

CANCER. starts as a small local lesion which if recognised early can be cut out, and thus get a permanent cure. This local lesion does not increase the liability for cancer to break out anywhere else on the body of the person.

ANNUAL RETURNS FOR FIVE YEARS OF NOTIFIED CASES OF INFECTIOUS DISEASES.

YEAR	Scarlet Fever	Diphtheria	Erysipelas	Pneumonia	Puerperal Pyrexia	Cerebro.Spinal Fever	Dysentery	Oph. Neonatorum	Tuberculosis Pul.	Tuberculosis.Other.	Whooping Cough	Measles	Malaria	Para. Typhoid Fever	Poli-Myelitis
1942	65	145	7	55	4	3	1	5	38	8	79	912	-	-	-
1943	123	98	13	82	6	1	4	2	57	8	90	80	-	-	-
1944	116	116	12	39	3	1	2	Nil	57	17	156	723	-	-	-
1945	69	108	6	35	3	9	10	3	56	8	79	87	1	1	-
1946	44	51	13	58	2	3	1	Nil	55	7	67	641	2	1	1

DIPHTHERIA

YEAR	CASES	DEATHS.	REMARKS.
1941	300	20	Not Immunised.
1942	145	5	" "
1943	98	3	" "
1944	116	6	" "
1945	108	3	One Immunised (Dec.1942).
1946	51	1	Not Immunised.

DIPHTHERIA IMMUNISATION PER YEAR.

Year	Under 5 years.	% of child population under 5 years.	5 – 15 years	% of child population 5-15	% of Total Child Population.	Cases of Diphtheria not immunised.	Cases of Diphtheria after immunisation.
1937	111	Estimated population not known.	135	Estimated population not known.	246 Estimated population not known	No record	No record
1938	81		54		135	" "	"
1939	101		415		516	" "	" "
1940	87	3.4%	205	4.0%	292 3.8%	" "	" "
1941	614	24.0%	929	18.0%	1543 20.2%	267	33
1942	743	29.0%	889	18.5%	1632 22.2%	117	28
1943	606	26.0%	615	13.0%	1221 17.3%	59	39
1944	487	17.4%	94	1.7%	581 7.1%	69	47
1945	638	22.1%	190	3.5%	828 10.1%	50	58
1946	505	17.9%	62	1.1%	567 7.0%	25	26
	3973		3588		7561	587	231

YEAR ENDED 31st.DECEMBER, 1946
Immunisation in relation to Child Population.

Number of children who had completed a full course of Immunisation at any time up to 31st. December, 1946.

Age at 31.12.46 i.e. born in year	Under 1 1946	1 1945	2 1944	3 1943	4 1942	5 to 9 1937-1941	10-14 1932 to1936.	Total under 15.
Number immunised	–	322	488	443	405	2,338	2,287	6,283
Estimated Mid-year Population 1946.	2,820 Age group 0 – 4(inclusive)					5,270 Age group 5 – 14 (inclusive).		

DIPHTHERIA IMMUNISATION.
YEAR ENDED 31st. DECEMBER, 1946.

	Under 5 years.		5 -15 years.	Total.
Total number of children immunised at end of previous year.	1591		4553	
Add: Immunised at Clinic	422		45	
" by Private Doctor or by adjoining authorities. Immunised away and moved into Blyth.	83		17	
	2096		4615	6711
		Add: Children now 5yrs.old	438	
			5053	
Deduct: Children now 5 years old	438	Deduct: Those over 15 yrs.	428	
Total at end of year	1658		4625	6283
Children completely re-immunised during the year.	23		59	82

SUMMARY OF DIPHTHERIA AMONG THE IMMUNISED IN 1946.

Period Elapsed.	No. of Cases.	
Up to 6 months	-	
6 months to 1 year	1	
1 year to 2 years	1	
2 year to 3 years	2	) 21 with over
3 " " 4 "	5	) 2 - 5 years
4 " " 5 "	10	) from date of
5 " " 6 "	4	) imminisation
6 " " 7 "	-	
10 " " 11 "	2	
No record of date of immunisation	1	
Total	26	

Table Recording The Age-Groups Of Cases Of Diphtheria During 1946.

Age-Groups.	No. of Cases.	No. of Deaths.	Fatality Rate.
0-1 years	-		
1-2 "	-		
2-3 "	-		
3-4 "	-		
4-5 "	3		
5-10 "	19	1	5.3
10-15 "	9		
Over 15	20		
Totals	51	1	1.98

	Treated in hospital.	Treated at home.	Total.
Diphtheria Cases	49	2	51
Convalescent Carriers VT+	3	-	3
Healthy Carriers VT +	9	-	9

IMMUNITY TO TUBERCULOSIS.

The public cannot be too much enlightened about the disease Tuberculosis which causes so much morbidity and mortality and one which specially affects the young and adolscent life. It is a disease which those who are adequately fed with the correct diets, who are properly housed, and who live a Hygenic life can escape it. (This statement can apply to cattle - 40% of which are affected and potential transmitters of the disease). If then some can escape it thus, there must be some body conditions which make them resist the disease. This resistance is what is meant by the medical term immunity applied to such cases, and it is a better term to use. We can divide resistance into natural and acquired resistance. By natural resistance we must mean that the body has enough inherent powers to be able when the tubercle germ first enters it either to kill it or prevent its growth. Acquired resistance may result from a primary infection stimulating the cells which form quick inherent robustness so that they are able to produce something to kill or influence its developement. This might either, be the formation of an antibody or the walling-in of the aggressive bacilli. Thus acquired resistance may kill off a secondary infection. On this idea some lines of treatment have been based to produce or activate resistance. By this it is possible for people with high resistance to acquire a further resistance either from a primary infection or by the crude method of a vaccine. What of those who have not the high resistance nor can't be 'estimated'? There are among both animals and races a natural resistance in various parts of the world; and on the other hand races highly susceptible with tragic results. It has to be remembered that possibly a high natural resistance may be broken down either by lack of nourishment (starvation), intercurrent disease, depression, or by massive infection by highly virulent strains of the bacilli. The body will respond to this second (or later dose) of antigen - here the Tubercle Bacillus or some product from it - and the difference from this response from that of its' first acquaintance (or primary infection) is spoken of as Allergy or hypersensitive, and may be part of resistance. (There is evidence that in certain areas of Britain the incidence of Tuberculosis in cattle is low and so it may be possible to inbreed with cattle of high resistance).

The attempts made to produce (i.e. induce) immunity to control Tuberculosis have been by (1) the use of living organisms of an attenuated bacillus (e.g. the B.C.G. Vaccine) or by using a type of the Bacillus which, though deadly to its' usual host, is of little significance when used on another animal, as in the case of avian tubercle used to immunise cattle, (2) using dead products of inactivated suspensions of Tubercle Bacilli. As referred to above it has been thought that the highest resistance could be brought about, by the continued existence in the body of the living organisms, and so it was concluded that the vaccine which would do most good was one which, though it was innocuous, still had a long period of existance in the body. It was thought that oily suspensions of the bacilli might allow a prolonged immunity but the experiments showed that this did not happen as the oils killed the bacilli, and in others the bacilli were encapsuled so immunity could not take place; in other animals some bacilli escaped from the sites and were found in the nearest glands. Experiments by the single dose of B.C.G. living vaccine showed the protection wanes so that re-vaccination has to be at frequent intervals. Experiments on animals with dead tubercle bacilli (killed by heat, formol, glycerol etc.), did not give high resistance, required multiple injections of small doses and frequently gave local sores - thus this was not valuable. It may be safe to say that we will not by present methods alter the course of infection or duration of immunity, merely by vaccination to produce desensitisation. We cannot as a practical proportion desensitise a whole community. On the other hand we have very definite evidence that diets containing first-class proteins raises the resistance both of contacts and the afflicted. The lack in the diet of inmates of Mental Hospitals with an increase of Tuberculosis among them is also circumstantial evidence of this first statement. The use of B.C.G. Vaccine in foreign countries gave encouraging results and is being experimented with in this country. Experiments in animals show it is easier to produce infection by inhalation than by the intestinal tract which may point to dosage being important. There can be no doubt about infection being conveyed in a house with a case of active tuberculosis expiring the bacilli into the air of a room. Abroad Tuberculosis can be a house disease, as I have proved, and the same holds good anywhere there is no segregation of the patient and adequate ventilation. All rooms which such a patient has vacated, or where a case died, demands proper disinfection. Personally I would like to see it was made compulsory also to plaster or re-paper. Will that come later under the new Health Service?

TUBERCULOSIS.

Increase in tuberculosis in this country:

	1939	1940	1941	1942	1943	1944.
Notifications	25,355	26,260	28,966	29,560	30,121	30,044
Not notified before death but died of Tuberculosis.	2,901	3,395	4,383	3,971	3,780	3,468
Blyth:						
Notifications	62	49	57	48	65	74
Deaths	31	30	20	31	20	30
Blyth:	1945.	1946.				
Notifications	64	62				
Deaths	26	38				

TUBERCULOSIS - 1944-1946.

	Notifications.				Deaths.			
	Males.		Females.		Males.		Females.	
1944.	Pul.	Non-Pul.	Pul.	Non-Pul.	Pul.	Non-Pul.	Pul.	Non-Pul.
Totals	28	12	29	5	16*	2	10	2
"	40		34		18		12	
Grand Totals	74				30			
	* - Includes Non-notified T.B. Cases = 2 Deaths.							
1945 Totals	35	4	21	4	10	2	10*	2*
"	39		25		12		12	
Grand Totals	64				24			
	* - Includes Non-notified T.B. cases = 4 Deaths.							
1946 Totals	40	15	5	2	22	11	5*	Nil
"	55		7		33		5	
Grand Totals	62				38			
	* - Includes Non-notifed T.B. cases = 2 Deaths.							

Tuberculosis 1938 - 1946.

Year	All forms of Tuberculosis notifications per year.	Number of Deaths.per year.	Death Rate per 1,000 population.
1938	48	25	0.7
1939	62	31	1.0
1940	49	30	1.1
1941	57	20	0.6
1942	48	31	0.9
1943	65	20	0.6
1944	74	30	0.9
1945	64	24	0.7
1946	62	38	1.2

TUBERCULOSIS.

Statement of Tuberculosis Cases - 1946 (As per Register).

	Males Pul.	Males Non-Pul.	Females Pul	Females Non-Pul.	Total.
(a) Number of cases of Tuberculosis on Register at commencement of year.	112	25	96	21	254
(b) Number of new cases notified under the "Regulations of 1930" for the first time during the year.	40	5	15	2	62
(c) Number of cases restored to Register having been removed previous to 1936.	3	-	-	-	3
(d) Number of cases added to Register and brought to notice otherwise than by formal notification	1	-	2	-	3
(e) Number of cases removed from the Register during the year.	28	5	25	1	59
(f) Number of cases remaining on the Register at the end of the year	128	25	88	22	263

TUBERCULOSIS - 1946

Summary of information extracted from Records Dept., relating to cases removed from the Tuberculosis Register of the Borough, during 1946.

	Pulmonary Males	Pulmonary Females	Non-Pulmonary Males	Non-Pulmonary Females	Grand Total.
Deaths.	22	11	5	Nil.	
Total	33		5		38
Recovered.	3	7	2	Nil.	
Total	10		2		12
Removed from District.	2	7	Nil	Nil	
Total	9		Nil.		9
					59

TUBERCULOSIS - 1946.

Age Groups	New Cases Pulmonary Males	New Cases Pulmonary Females	New Cases Non-Pulmonary Males	New Cases Non-Pulmonary Females	Deaths. Pulmonary Males	Deaths. Pulmonary Females	Deaths. Non-Pulmonary Males	Deaths. Non-Pulmonary Females
0-1	1	-	1	-	-	-	2x	-
1-5	1	2	2	1	1	-	1x	-
5-15	8	1	2	1	-	2	1	-
15-25	7	9	-	-	7	6	-	-
25-35	8	3	-	-	4	2	1	-
35-45	8	-	-	-	2	1	-	-
45-55	2	-	-	-	5	-	-	-
55-65	4	-	-	-	3	-	-	-
Over 65	1	-	-	-	-	-	-	-
Totals	40	15	5	2	22	11	5	Nil
Grand Totals	55		7		33		5	

x = Non-notified as T.B. cases = 2 Deaths.

TUBERCULOSIS 1946.

Ward distribution of notifications and Deaths.

Ward	Notifications	Deaths.
Bebside	1	5
Croft	13	9
Delaval	6	4
Plessey	19	4
Ridley	10	9
Waterloo	13	7
	62	38

PUBLIC HEALTH UNDER THE HEALTH SERVICES ACT 1946.

There is a tendency to centralisation and regionalisation. Too much centralisation will lessen the necessity of some smaller authorities and it will take away that personal contact between the local authority, its officials and the people. Regionalisation as we knew of it during the war with semi-dictatorships must not exist, but form an economical point of view is probably justified. The hope of smaller localities lies either in combining with each other to form a definite unit or in having certain of the existing Health Services, threatened to be taken away from them, to be delegated to them by the County Council.

What services will the future Medical Officer of Health have? He will have (1) Control of infectious diseases (2) Environmental Hygiene (3) Control of Sanitary departments (4) Supervision of food-stuffs (5) Health Education (6) More direct interest in Housing (7) Social Medicine (8) Epidemiology (9) Concern of the aged and infirm (10) Child guidance, the potential mother and family problems (11) Smoke pollution (12) Enquiries into all factors leading to malnutrition and ill-health and prevention of all disease (13) Water supply (14) Nurseries for toddlers (15) Rat infestion control (16) Scabies.

There seems little doubt there will be less attraction to some doctors to become Medical Officers of Health, and besides we are now to have two classes of such in the future. The executive Medical Officer of Health will have all the statutory duties to perform, and the lower grade of officer not necessarily having a D.P.H. qualification but a certificate on Public Health who will look after the school Health Services, Child welfare, and domiciliary disability outlined in Part 3 of the National Health Service Act. This fission of services is to be based on "major" and "lesser" authority established by the Local Government Act of 1888. Thus you can get a larger area of country becoming a "major" authority, whilst a congested urban area of even 3/4th. the population of the former becoming a "minor" authority. A county may exercise its powers under Section 103 of the 1888 Act, and if not the number of Medical Officers of Health will dwindle, and it is likely the number of local authorities will be reduced. Unless there is a unified control of the staff that exist in the different sections of the Health Department by its executive Officer you will not get integration and team work essential to the Public weal. It is possible for adjacent local authorities under the local Government Act of 1933 to form a joint Health Committee and this may safeguard some of the services to them.

The Education Act of 1944 has given us the age of two years from when the local Education authority will be responsible for the Physical and Mental disabilities of the child. The Act also permits medical and preventive treatment (but not domicilary treatment). Are the Child Welfare and School Medical Services going to be one unit? If so then the Maternity section will probably be separate. I look upon the Act as a great step in the right direction, but centralisation must be limited. Local authorities are now called upon to elect a special Health Committee on which local residents outside the members should be nominated to consider the requirements of the Act. Personally I should like to see each local authority control its own Ante-Natal Services and these might be asked to be so delegated. Any hospital administered by a Port Health Authority will be transferred to the State on 1st. January, 1948

FOOD AND THE MINER.

At present coal production is a priority subject. It is a fact that heavy muscular work utilises more energy and so requires extra calories of food intake. Experiments in Germany (by Kraut Muller) on a group of 31 miners during training who had 2,800 calories (1,200 as work calories) gave a daily output of 7 tons of coal per man (thus each ton equalled about 170 calories). But when given 400 extra calories a day and they increased their output to 9.6 tons per day (expending only 155 per ton) they lost in six weeks an average of 1.2kg (1kg = 2.2lb) of body weight. A further 400 calories per day showed indreased output to 10 tons per day with body weight regained.

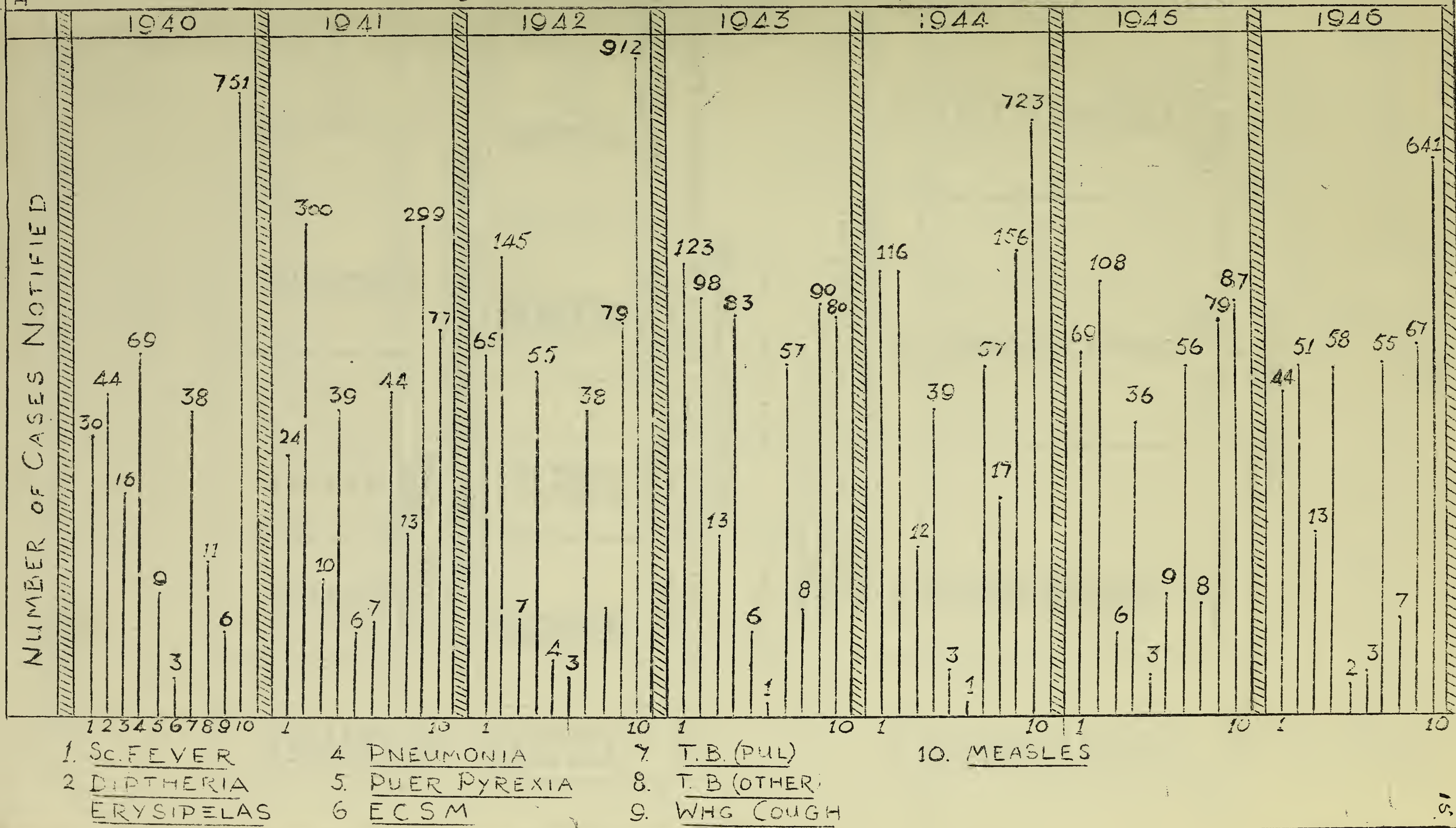
INFECTIOUS DISEASES NOTIFIED AND AGE DISTRIBUTION.

Number of Cases of Infectious Diseases originally notified during the year 1946 and of the Final numbers according to Age and Sex, after corrections subsequnetly made either by the Notifying Medical Practioner or by the Medical Superintendent of the Infectious Diseases Hospital.

Ages etc., N.K. - Age Unknown. Numbers originally notified	Scarlet Fever		Diphtheria		Whooping Cough		Measles Ex. Rubella		Acute Pneumonia		Dysentery		Erysipelas		Puerperal Pyrexia	E.C.S.M.		Acute Polio-Mylitis		Malaria		Para-Typhoid	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	F	M	F	M	F	M	F	M	F
Civilians (All Ages)	26	18	18	32	36	31	339	303	34	24	1	-	6	7	2	3	-	1	-	2	-	-	1
Non-Civilians" "	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Grand Totals	44		50+4 N.C.		67		642		58		1		13		2	3		1		2+1N.C		1	
Final Numbers After correction																							
0 -	-	-	-	-	2	1	19	24	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-
1 -	2	2	-	-	15	13	62	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 -	3	3	2	1	8	9	95	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 -	18	9	6	11	11	8	157	135	6	2	-	-	-	-	-	1	-	-	-	-	-	-	-
Civilians 10 -	2	3	3	4	-	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 -	-	1	3	7	-	-	1	2	15	8	1	-	1	2	1	1	-	1	-	1	-	-	1
25 -	-	-	3	5	-	-	3	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
45 -	-	-	-	-	-	-	-	-	4	3	-	-	4	2	-	-	-	-	-	-	-	-	-
65 and over	-	-	-	-	-	-	-	-	-	5	-	-	1	3	-	-	-	-	-	-	-	-	-
Total Civilians	25	18	17	28	36	31	338	303	34	24	1	-	6	7	2	2	-	1	-	2	-	-	1
Grand Totals	43		45		67		641		58		1		13		2	2		1		2		1	
Non-Civilians (15 (or N.K.)			2	-																1	-		
(45 and over																							
Total Non-Civilians			2																	1			

The difference in the total cases notified and final number after correction, is shown as follows:-Diphtheria (6 cases - civilians)5 re-diagnosed as Tonsillitis and 1 as Scarlet Fever. Diphtheria (2 Non-civilians) 1 re-diagnosed as Tonsillitis and 1 notified as non-civilian case now included as a civilian. Scarlet Fever (2 cases) 1 re-diagnosed as Chicken Pox and 1 notified in error. E.C.S.M.(1 case) notified in error. Measles (1 case) duplication of notification.

— INFECTIOUS DISEASES NOTIFIED — BOROUGH OF BLYTH —



INFANT MORTALITY.

YEAR	A Female Births Live	B Female child deaths under 1 year.	C Female Deaths All ages.
1934	275	16	170
1935	308	21	199
1936	286	23	189
1937	272	17	204
1938	284	20	202
1939	288	14	165
1940	271	19	171
1941	216	22	166
1942	247	9	171
1943	267	17	185
1944	353	18	156
1945	297	20	175
1946	372	17	171
Totals	3,736	233	2,324

A. 1934-1938 Registrar General's figures.
1939-1941 Local Registrar's returns.
1942-1943 Registrar General's "
1944-1946 Local Registrar's "

B. 1939-1941 The total Infant only.

HEALTH VISITING SERVICES.

YEAR.	First Visits to infants	Re-visits to infants under 1 year.	Visits to children 1-5 years.	Ante-Natal Visits First Visits
1940	510	1652	1825	88
1941	745	870	1689	87
1942	459	1040	2140	50
1943	469	984	2280	43
1944	664	1318	2620	19
1945	653	747	2548	22
1946	731	556	2110	68

NOTIFICATION AND REGISTRATION OF BIRTHS

YEAR	NOTIFIED BIRTHS		TOTAL.
	LIVE	STILL	
1940	552	.	
1941	573	19	592
1942	539	15	554
1943	604	13	617
1944	719	13	732
1945	628	23	651
1946	741	18	759

MATERNITY HOME.

The principle of having a local Maternity Home being conceded the question of practicability arises as to the actual number to be provided for, where located, at what cost, and the required staff and equipment.

The proposal to utilise Beulah House (used for many years as a centre for our clinics) as a Maternity Home was decided upon though I did not consider the building a suitable one for adaptation to the requirements of a modern Maternity Home. It required a great expenditure added to the inflated purchase price (£2,000). The conversion cost is estimated at a minimum of £3,380 (less £600 if domestic staff and laundry are not required) It meant the transfer of the Infant Welfare & Toddlers Clinics to the underground rooms of the A.R.P. report centre, which I consider most undesirable. The conversion of the report centre for this purpose and the Ante-Natal Clinic, is estimated at £2,150, (alteration to the report centre alone being £600 of this) with a storey added. The required furniture (beds, tables, lockers, basinettes, etc), would cost £645-17-0. Kitchen utensils, crockery, etc., - £45; Nurses requirements - £19-2-0; Staff for first year - £1,630; Cook, helpers, and cleaning - £312; Mattresses, Blankets, Pillows and linen - £137; Maintenance of patients - £11-5-0 per year for each (and it is estimated 216 cases a year may be provided for); Telephone, Gas, and Electricity - £75; Furniture for centre control -£30. There is no estimate made of feeding Matron, Nursing Staff or domestics nor for rates. The above shows how expensive an item it is going to be with a heavy burden to the rates. It will probably be difficult to get the necessary staff and if they could be got they could more economically be utilised at existing Maternity Homes and Hospital wards which have empty beds for want of staff.

Treatment of Infants and Pre-School Children.

Minor Ailments Clinic.

	No. of Cases.	Total Attendances.
Diseases of the Skin:-		
Scabies	5	14
Impetigo	17	58
Eczema	2	21
Others	22	48
Minor Eye Defects:-		
Ophthalmia	5	86
Conjunctivitis	15	81
Minor Ear Defects:-		
Otorrhoea	3	18
Others	3	17
Miscellaneous:-		
Minor Injuries etc.	7	17
Verminous Heads	1	2
Ringworm	2	10
Totals	82	372

Sun-Ray Clinic

	Between 1 and 5 years.	
	Male	Female.
No. of Children	19	17
Attendances	525	
	Over 5 years.	
	Male	Female
No. of Children	12	13
Attendances	346	

26 children, under five years, were treated for the following complaints:-

Rickets	2
Debility	14
Glands	1
Coryza	4
Anorexia	1
Post Pertusses	1
Catarrh	1
Mal-nutrition	1
Heart	1

In addition to the above, 10 children received Sun-Ray Treatment as a Tonic.

19 Children over 5 years were treated for the following complaints:-

Bronchitis	2
Debility	10
Coryza	2
Conjunctivitis	2
Alopecia	2
Heart	1

6 other children received Sun-Ray treatment as a Tonic.

Dental Clinic.

	Extractions	No. of Cases.
Children under 5 years	67	27

Ophthalmic Clinic.

Number of New patients	23
" " old "	17
Spectacles prescribed	19
" not "	21

Throat, Nose and Ear Clinic.

Operations for removal of Tonsils and Adenoids	2

Orthopaedic Defects.

Number of children with Orthopaedic defects	2

Maternity & Child Welfare Services.
Home Visiting by Health Visitors.

Visits to Infants under 1 year:-			
First visit after notification	731		
Number of re-visits	556		
" " women visited who had "still-births"	18	-	1305
Visits to children 1 - 5 years			2110
" " expectant mothers (first visits)			68
	Total		3483

Miscellaneous Visits.

	First Visits	Re-visits	Total.
Puerperal Disease	2	-	2

Infant Welfare Clinic.

TABLE A.

No. of Sessions	First Attendances	Re-attendances	First Attendances	Re-attendances.
	0-1 year	0-1 year	1 - 5years	1 - 5years
102	402	3,530	55	332

TABLE B.

Total No. of Attendances	Average No. of Attendances	Average No. at M.O.'s Sessions.
3,862	37.88	7.9

Total Number of children under 5 years who attended the Clinic:- 542

Total Pre-School children seen in 1946 by the Medical Officer of Health

At Toddlers Clinic	116
" Baby "	615
" Immunisation completed	540
Total	1,271

The total quantity of milk supplied by the Council at the Clinic to young children was 5,482 lbs. of Dried Milk.

The following conditions were noted among infants under 1 year of age.

Congenital Malformations:-

Congetial Heart	1
Phimosis	41
Umbilical Hernia	15
Marasmus	1

The following conditions were noted among infants under 1 year of age:-
(continued)

Congenital Malformations:(continued)

Talipes	1
Nephritis	1
Pyloric Stenosis	4
Pinks Disease	4
Meningitis	1

Diseases of the Digestive System:-

Feeding Dyspepsia	14
Vomitting and Diarrhoea	6
Constipation	14

Diseases of the Respiratory System:-

Bronchitis and Bronchial Catarrh	14

Diseases of the Skin:-

Infantile Eczema	5
Impetigo	3
Dermatitis	2
Other Sores	26

Diseases of the Eye:-

Conjunctivitis	13
Blepharitis	3
Ophthalmia	3
Squint	1

Disease of the Throat, Nose and Ear:-

Otorrhoea	7
Otitis	1
Cervical Glands	2

Other Diseases:-

Cyst	1
Tongue Tie	4
Naevi.	17

Toddlers Clinic:-

Special Sessions were held, when necessary, for children between the ages of 2 and 5 years.

No. of Sessions	Average Attendances	Examinations By M.O.	Total Attendances.
10	11.6	116	116

At these Sessions, the following conditions were found:-

Congenital Malformations:-

Heart Disease	1
Inguinal Hernia	1

Diseases of the Respiratory Tract:-

Bronchitis and Bronchial Catarrh	7
" " Nasal "	5
Dental Defects	4

Diseases of the Skin:-

Scabies	1

Diseases of the Eye:-

Cataract	1
Squint	1

Diseases of the Throat, Nose and Ear:-

Enlarged Tonsils and Adenoids	2
Otorrhoea	1
Cervical Glands	2

Other Diseases:-

Pes Planus	7
Genu Valgum	3
Enuresis	2
Deaf Mute	1

Vitamin Product Scheme:-

The above scheme was still in operation during 1946, at the following Centres:-

Ante-Natal Clinic, Beulah House
Municipal " " "
Bebside Senior School
Newsham Junior
Seaton Sluice (Sessions held fortnightly

Attendances reached the following figures for 1946:-

Ante-Natal Clinic	Municipal Clinic	Bebside	Newsham	Seaton Sluice
1,845	499	172	994	131

Much of the Vitamin Product is now issued at the Food Office.

Child Life Protection.

Under Section 206/220, Public Health Act, 1936, four (4) persons were receiving four (4) children for reward at the end of the year. The Health Visitors reported that the children were well cared for in satisfactory homes.

Infectious Diseases in Children under 5 years of age:-

Disease	No. of cases notified	Against 1945.
Diphtheria	3	-
Scarlet Fever	12	-
Measles	335	+
Whooping Cough	48	-
Pneumonia	15	+
Tuberculosis (Pul.)	3	+
" (Non-Pul.)	4	+
Total	420	

Health Visitors paid visits to 344 cases of Infectious Diseases.

Maternity Services.

Number of patients who were confined in Maternity Hospitals, during 1946, were as follows:-

Hospital	Free	Assisted	Paid own Fees	Total
Dilston Hall Maternity Hosp.	53	62	-	115
Preston Road " "	12	20	4	36
Princess Mary " "	2	27	-	29
Mona Taylor " "	7	27	15	49
Willington Quay " "	1	-	18	19
Ravensbourne " "	-	-	7	7
Grosvenor " "	-	-	11	11
The Gables " "	-	-	2	2
The Priory " "	-	-	1	1
Others "	-	-	2	2
Total	75	136	60	271
Percentage	27.7	50.2	22.1	

Maternity Outfits.

Bags were loaned out 6 times during the year.

Puerperal Pyrexia.

Total cases notified 2

Ophthalmia Neonatorum

Total cases notified Nil.

Dental Treatment.

No. of Mothers	Extractions	Local Anaesthetics	Dentures Supplied
62	301	All	7

HEALTH VISITORS' REPORTS ON CONFINEMENTS, INFANTS BORN, ETC.

Month.	No. Confined.	Sex M.	Sex F.	Over-crowded.	Wholly Breast-Fed.	Artificial or Combined.	Premature Deaths.	Period	Still-Birth.	Illegitimate	Caesarean.	Total Visits Paid.	REMARKS.
Jan.	42	26	16	7	23	17	1	1(2days)	–	4	–	52	
Feb.	46	21	25	13	29	16	1	1(24 hours)	1	2	–	19	
Mar.	50	28	22	12	22	23	2 (twins)	1(3wks.) 1(3mins.)	1	2	1	65	
April	60	34	26	13	33	25	–	–	6	5	–	40	
May	87	44	43	8	51	30	–	–	2	4	–	89	
June	61	25	36	12	36	19	1	1(12 hours)	–	2	–	63	1 Jaundice
July	51	23	28	13	33	14	2 (twins)	1(3days) 1(5wks.)	1	2	–	64	1 Jaundice
Aug.	68	34	34	14	41	19	2 (twins)	2(3½ hours)	1	2	–	56	1 Haemorrhage.
Sept.	75	37	38	13	49	21	1	1(3 months)	1	2	–	49	1 Broken-arm.
Oct.	65	34	31	9	45	17	1	1(4days)	1	3	–	93	1 Janudice 1 Talipes 1 Congenital Heart
Nov.	69	34	35	8	42	24	–	–	–	3	–	59	1 Talipes 2 Rashes
Dec.	57	31	26	4	23	9	–	–	2	1	–	54	1 Spina Bifida
TOTALS.	731	371	360	126	427	234	11	11	16	32	1	703	11.
Actual:	741	373	368										

703 Visits per annum done by Three Health Visitors,
= 234 Visits per annum per Health Visitor –
say 20 Visits per month per Health Visitor

NUTRITION.

There seems to be some doubts among some of the public of what constitutes malnutrition - (a departure from health) and to confuse a lowered weight-height ratio according to age as necessarily due to deficient food. We should therefore be clear as to our definition of the term "nutrition". Lusk has defined nutrition as the "sum of the processes concerned with growth, maintenance, and repair of the living body as a whole or of its constituent parts"*. Consequently it is not only the actual food taken but all the other processes by which the food is changed for the body's use for its building and repair of its tissues and for the needed energy. Thus quantity and quality of food by themselves will not guarantee that the body will be well nourished. Fresh air, exercise, body and mental rest and absence of environmental factors and of organic disease are all allied to adequate nutrition. So far as food is concerned it may be adequate in quantity but lack quality or be deficient in vitamins or essential mineral content. Insufficient means to buy the proper quality plays a part in some cases of malnutrition. The term "nutrition" has been limited by Professor Cathcart to the general state of well-being of a person who is physically and psychologically sound. Malnutrition refers to a state of the body which is not solely dependent on food intake. Nutrition dependent on the intake of food is expressed by the term alimentation. Alimentation, whilst essential, is one factor in nutrition. Sir John Orr in his survey of diets found 50% of the population as having too low incomes to enable them to have food completely adequate for health. Orr defined perfect nutrition as "a state of health such that no improvement can be affected by a change of diet".

The crucial question the medical examiner has to ask himself after examination is whether the child is getting on as well as he or she should. Apart from disease it is a question whether growth and development are proceeding normally according to age. Mere inspection or measurement cannot determine all the factors which go to the "make-up of the child. Malnutrition is a problem of failing growth and development, and this does not depend merely on inadequate food but on other factors in which also environment influences (home tensions, lack of hygiene,etc.), take a part. Early recognition is necessary, but its signs may not be obvious till later. One or more physical defects may not justify its diagnosis. It may be that easily fatigued or scholastic failure may show well advanced malnutrition. "Putting on weight"/ is only part of the problem what is fundamental is to find the cause of the lag in growth and development and rectify these. Malnutrition is not a matter of starvation simply but one of several interacting influences. Physique is more fixed and less sensitive to change than development and both these properties are specific to each child. A child will lose development more quickly than he will lose physique; a child developes normally about 100 times as much as he changes physique. This may be explained by a greater amount of metabolising in the "soft tissues" than in the physical components related to the less metabolic skelton. Each child has a standard of his own in development.

Weight and Height gains: The concept of underweight can do much harm. A child of only 5% underweight from the standards used might have gross malnutrition and could be missed as he escapes the usual 7 to 10% deficiency to grade him below normal. If he is underweight then the question is underweight to what? What is usually done is to relate his underweight to some arbitrarily chosen standard of averages as though every child should be exactly what that average happens to be.. These weight curves cannot give information as to the physical condition of the child and no indication as to whether the child's pysique has altered from the last time he was weighed. Some think that so long as a child continues to gain weight regularly there can be nothing serious about his growth. It would be a pity to entirely discard the red light of Weight for Height (not age) assessment.

Nutrition assessment: Height and weight is taken all over the country for determination of the nutritional state of children. It is a false standard and the assessment must vary - and it does - at different parts of the country and in different counties, and is no doubt also partly due to the individual deciding the assessment. One cannot think that with so much strain, anxiety, loss of sleep, with some deficiency of food, and vitamins, and possible lessened exercise, that nutrition could remain normal. It can be abnormal without height-weight ratio being much upset. I have been assessing on 10% or more below weight for height when these are the main factors and this has the support of good authority, (Nixon).

Joad considers there are 22½ millions living on a diet below the minimum standard.

There are various methods of assessment and those by formulae, in my opinion, should not be supported.

Mal-nutrition: Some symptoms or signs: Thinness, wastage of muscles, Oedema, tiredness, loss of appetite, conjunctivitis, (thickened skin of ankles, backs of hands, elbows, knees); dry skin; petechial rashes. Diarrhoea from nicotinic acid deficiency. Armblyopia, skin lesions, tongue lesions, Neurological symptoms (rapid heart beats, abnormal tenden reflexes), Riboflaven deficiency (Angular stomatitis, etc.) Anaemia.

It may even result from over dosage with liquid paraffin interfering with vitamin B absorption or synthesis. Over dosage of calciferol (Vitamin D2) can produce from a mild state of anorexia (loss of appetite) to serious symptoms (pallor, pains, stupor, interference with kidney function, etc.). Mild toxic doses it has been found may result from even a single dose of 15 gm given to a child. A daily dose of over 1 gm is considered as potentially dangerous. Thus self medication or over dosage of Vitamins without advice can cause serious effects.

Imbalance of certain essential ingredients of foods can cause interference with Nutrition. Thus carbohydrates are essential to life and are distributed as glycogen which the liver requires for its function of destroying toxins; and carbohydrates aid fat utilisation. Carbohydrates and fats are required for energy and if they are insufficient then some of the essential animo-acids formed from proteins, have to be used and so the necessary animo-acids will be deficient and so their requirements for growth being lessened will interfere with growth. Thus both carbohydrates and fats are sparers of proteins. Carbohydrates cannot be subsituted for fat as they have not the essential fatty acids nor the fat soluble Vitamin D. Vitamin B is essential for the breakdown of carbohydrate and deficiency of it will interfere with the metabolism of every tissue in the body. On the other hand the amount of Vitamin B can be reduced if there is ample fat. Calcium and phosphorous are complementary in action, and acids in the intestine convert calcium into more assimable forms and also eliminate free acids which further aid absorption of calcium. Again adequate Vitamin D and ascorbic acid are necessary for the retention of calcium and phosphorous, and these are necessary for bony growth.

POPULATION.

Only females between the ages of 20 and 40 are of reproductive value. The enemies to family life are (1) Contraception (2) extra-marital relations (3) some reasons for divorce (4) overcrowding.

Excess of births over deaths does not indicate a continuing rise of the population. The high birth-rates at the present are natural from the high birth rates after the 1914-18 War giving a higher marriagable market, and it also marks a lower death rate and a higher proportion of the healthiest i.e. those in middle life. When the population contains a higher proportion of the oldest ages then the death rates will be higher. The first essentials of a population policy is to raise the standard of living and security with it. Quality can only be achieved from debarring from marriage the mentally defective and illegitimacy. This calls for a great education policy of the public. Part of the policy will have to be domestic help and nurseries for the care of children while a woman works or is ill. Some would substitute in place of family allowances a subsidy towards the (furnishing costs) and costs of food, etc. It is estimated that by 1950 the number of persons over 60 will be five millions and a new problem will then arise.

DELINQUENCY.

What does this term connote? It includes all forms of Anti-Social behaviour. Thus it may be divided into (1) definite transgression of some definite law (indictable offence), (2) some mischevious behaviour, (breaking of fences, destruction of trees, braggartism learnt from film shows, etc.) (3) miscellaneous - neurotic traits, tantrums, educational difficulties, etc.. Since there is definite evidence that most adult crimes have their origin in some maladjustment in child-hood the early recognition and adjustment or treatment of them assumes Public Health importance. There is not one simple solution of this complex problem and the earlier the community tackle it the less the crimes and break up of homes.

The most important point in the solution of the problem is to work out practical schemes for the prevention of crimes of delinquency among the physically and mentally normal juveniles who are to be found in (2) or (3) above. In the final year of school some Education for citizenship is essential in any scheme for prevention. The question has been left too much in the hands of Magistrates and with the Anti-Scientific bias too common among lawyers. There is undoubtedly a case for revision of the existing law.

(Children & Young Persons' Act, 1933). - This Act was born at a time when ill-fed neglected urchins were forced to commit crime in order to exist. The conditions of Public Health and Welfare and Educational Acts have produced an entirely altered state of affairs. We have to-day to deal more with the naughty child than the criminal one, and the child frustrated by home conditions. Yet by the Act this modern type of delinquent is treated as "not responsible for their actions", and so the treatment or punishment becomes inadequate and should be more in the lines of re-education. If modern young offenders are whipped or fined or sent to an approved school for long periods, then it cannot be maintained that the present methods do treat them as being irresponsible. Will delinquency crime increase when the school age is raised and these older children get less in pocket money from parents than what they can earn now as message boys, girls, etc.? There are cases of backward adolescents which adult courts should not try, and should have the power to refer to Juvenile Courts for appropriate treatment, such as sending to an approved school, which only Juvenile Courts can do. In many cases the environment of an adult court is unsuitable for dealing with young adolscents, (17 - 21 years). The non-delinquent in "need of care of protection" owing to home conditions is treated in the same manner as delinquents, and being sent to approved schools have to associate with the real delinquents which too often will do no good to them. Each case requires treatment according to all the circumstances and the particular facts of the individual. There is an underlying moral principle in dealing with such cases and if one has faith in such then there is a call for change of policy. Local Authorities can help by a provision of games, churches by Young Clubs; and local women by Girls' Clubs.

The law divides legal infancy into three periods of seven years. Thus under seven years of age a child is regarded as incapable of a Mens Rea or recognition of the guilty nature of his acts. Between seven and fourteen years a presumption of this recognition exists, but clear evidence is considered necessary to determine the degree of guilty knowledge before such a child can be convicted. Over the age of fourteen years he or she is deemed to have full knowledge and thereby to incur full criminal responsibility, (unless proved otherwise). At twenty-one years he or she is regarded as having attained full cognisance of his or her social relations, and so has conferred upon him or her full civil rights and legal responsibilites.

In maladjusted groups the following types of personalities may exist.

Compulsive type: These result from an over-hard father; fear from the whip or other punishment; or from the desire to please an over ambitious mother who over-estimates her son's capabilities. Thus the boy or girl becomes tense and anxious, and whilst anxious to achieve perfection are easily worried and react badly to failure and criticism.

Their original fear against their father is carried in life to hate against restricting authority.

Over-aggressive type:- Here we have obstreperous conduct because they rebel against parental dictates, and in later life kick against authority. They are ill-adapted to team-work as they do not like taking orders and inclined to insolence. Some of them become Schizoid psychopaths. They might possess an inferiority complex which compels them to fight for every imagined complaint.

Unaggressive type:- are the mollycoddled children and become timid adults. They become timid because they do not wish to loose good relationship with those around. They demand affection. They cannot tolerate ill-treatment of animals.

Bisexual type:- is where the child identifies himself or herself with both parents. If the characteristics of the parents blend all is well, but if, as is usually the case, one parent is adored, (usually the opposite sex), and the parent of the same sex is rejected, then the male child becomes effeminate, and the female child becomes masculine. Various morbid fears are found in this group.

Phobic type:- Fears of various kinds are to be found. Fear of darkness; fear of disease; fear of some domestic animal; fear of the opposite sex; fear of going up a ladder; fears of certain games. All these have to be dealt with in a kindly spirit.

Juvenile Delinquency in the past has been looked upon by a large majority of citizens as nothing more than pure wickedness, and the law did not recognise any transgression of the law unless the juvenile attained the age of fourteen. Whilst laws, compulsory education, and elementary education tended to protect the child against parental authority, certain "pictures" at cinemas and some "light" reading-books and papers tended to show the existence of immoral conduct in their new world whilst temptations to steal existed in open shops and in displays inside shops. Some account has to be taken of mixing with a new set of juvenile whose character is unknown to them and who steal from want of moral stamina. The juvenile court can never be the normal cure for naughtiness nor want of moral stamina. These can only be cured by proper parental education and control. So therein exists a parental problem. If parents and controllers of youth clubs can take these in hand and avoid a juvenile court then so much the better for the youth concerned and the assessing of the "cases" before the juvenile courts. The greater proportion of juvenile delinquency cases come from the poorer classes and those in cities and larger towns especially in slum dwellers. These facts point to parental control, wants by the youth of things he lacks and sees others have, as well as the absence of moral teaching. If parents lack control by drinking bouts, constant nagging or temper outbursts the child will learn also lack of self-control. The mental make-up of every child is different and whilst one correction may be sufficient for some the "shock" of an appearance at a juvenile court may have a serious reaction on others - the juvenile may regard himself as being tainted as an outcast and thus continue his abnormal conduct.

The Children and Young Persons Act of 1933 "conclusively presumed that no child under the age of eight can be guilty of any offence". But this can in certain cases be overcome by the law, viz: the delinquent as "beyond control" or in "moral danger", and deal with him. At the beginning of the twentieth century there were three main problems connected with Juveniles viz:- (1) Offences committed by them treated by the reformatory school, the industrial school and prison. (2) Offences committed against them; and (3) Vagrancy and destitution cases who were sent to industrial schools. To Industrial schools too a child could be sent (since 1894) for a first offence or for wandering and getting into bad company. By the Childrens' Act 1908 any child under 12 could be sent to an industrial school, or put in custody of a "fit person", or left at home under the supervision of a protection officer for a crime, wickedness, unfit parents, truancy. Offenders between 12 and 16 could not be sent to an industrial school unless the court certified that they were not likely to have an evil influence on other children there. If this could not be given they had to go to a reformatory. Children 14 or 15 were too old for the institutions and had to be under a probation officer or a foster home or both. After 1908 no child under 14 could be sent to prison; and by the 1933 Act for offenders between 14 and 17 imprisonment could only be given on a certificate of a court that the individual was too unruly or too depraved. By the Act of 1908 local authorities had to segregate young children from grown-up criminals and so close places of detention for those under 16, and these too in police courts were to be kept apart from adult offenders. Thus arose the juvenile courts. With this arose the modern Acts, Children and Young Persons Act 1933 and its amending Act of 1938. The keystone of the 1933 Act is Section 44 which impresses upon the need of "care and protection", the Child's Welfare, removal from unhappy surroundings and proper provision for education and training. All Industrial Schools and reformatories now became " approved schools", Junior, Intermediate and Senior. Juvenile courts had now power to use for all types of delinquency all methods of dealing with them, viz: Foster Homes, Supervision under Probation Officers, Authorising Local Authorities to take Juvenile under a "fit person" order, All up to 17 and those sinned against coming under the term "in need of care and protection", can so be dealt with. Then there is the Borstal institution for the worst types. The 1933 Act protected the juveniles from publicity by prohibiting the press revealing their identity. The magistrates may call for various reports on conduct and character but must inform the child the substance of them and as also the parent or guardian.

Juvenile courts have complete jurisdiction over all offences except homicide, and a sentence to a Borstal Institution is the only one which they cannot exercise but which must be given by a higher court. No case of "care or protection" and "beyond control" can be tried outside a juvenile court. At the age of 14 however a juvenile if charged for any indictable offence can claim the right to a trial by jury. Rights of appeal on facts and law or both exists. Each Juvenile Court consists of not more than three justices of the Peace and must include one man and one woman (if possible). Their clerk keeps them within the law, and the probation officer is the Welfare Officer of the Court. Besides the Probation Officer the Local Authoritymust be informed when any juvenile is to be brought before a juvenile court; and thereon the local authority must enquire as to the "home surroundings, school record, health and character" and make a report to the court, (usually the School Attendance Officer does this - provides the facts only).

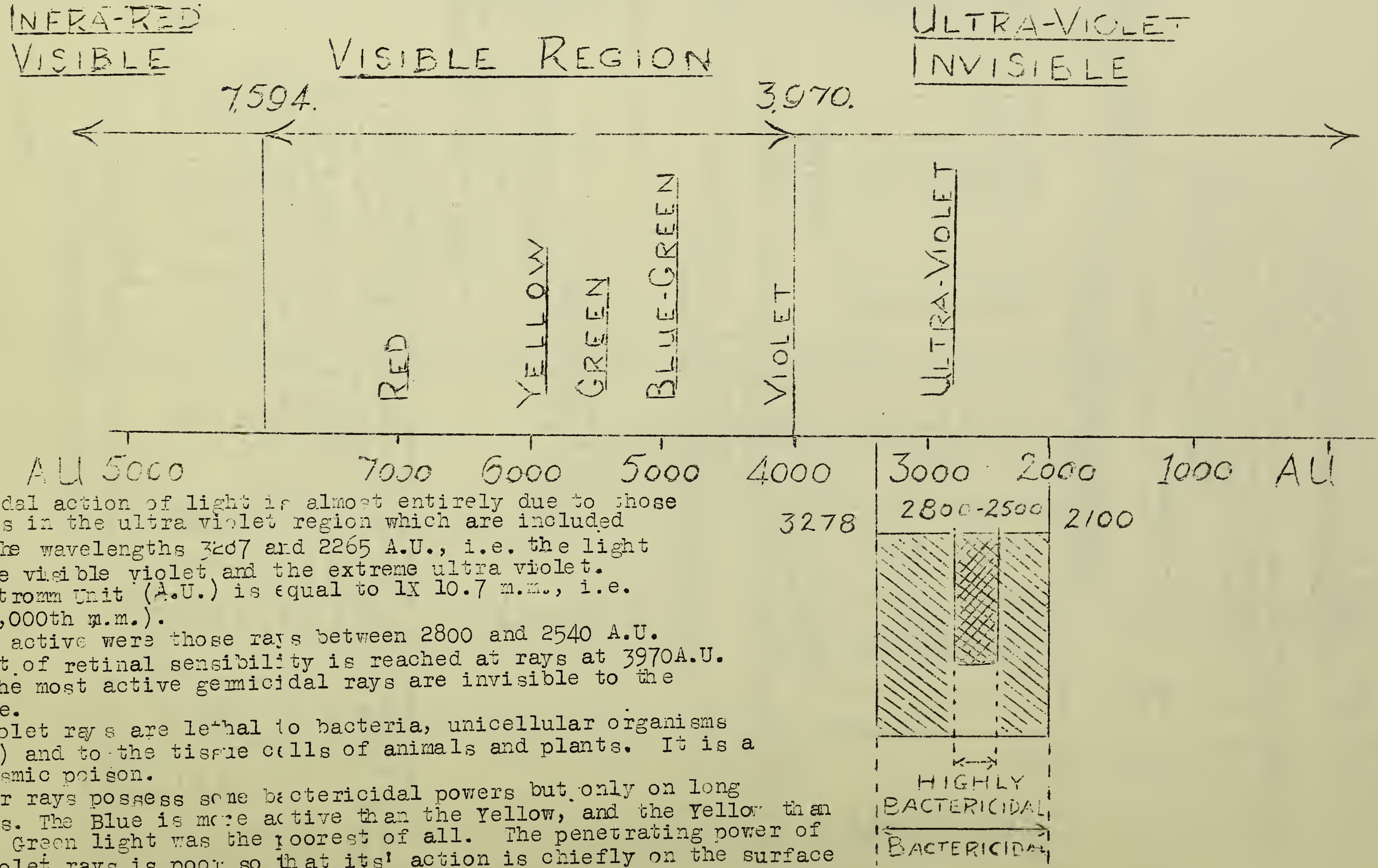
The Court can utilise the Probation of Offenders Act for trivial and other circumstances. Under this the case may be dismissed completely; put on probation for a period, release on condition of being under supervision or simply "bound over". Probation prevents the delinquent from being taken from the home.

A "fit person" order gives the best chance of saving a delinquent from a life of crime.

Penal Actions: These are, whipping, detention in a remand home; imprisonment, and Borstal Institution. For prison the minimum age is 14 and for Borstal 16. The juvenile of 14 and upwards can only be sent to prison if he is certified to be too unruly or too depraved for a remand home. A juvenile cannot be sent to an approved school unless his offence is one for which an adult could get imprisonment. A child under 10 can't be sent there unless there is no other way.

Good parents exist in all strata of people. A community can help much in this prevention of delinquency by taking early care of the juveniles in its midst. In my opinion a special voluntary committee of citizens keenly interested should enquire into each case to prevent court action.

DIAGRAMATIC REPRESENTATION OF THE SPECTRUM SHOWING THE RANGE OF BACTERICIDAL RAYS IN THE ULTRA-VIOLET REGION.



Bactericidal action of light is almost entirely due to those radiations in the ultra violet region which are included between the wavelengths 3267 and 2265 A.U., i.e. the light between the visible violet and the extreme ultra violet. (An Angstromm Unit (A.U.) is equal to 1X 10.7 m.m., i.e. 1/10,000,000th m.m.).

The most active were those rays between 2800 and 2540 A.U.

The limit of retinal sensibility is reached at rays at 3970A.U. and so the most active germicidal rays are invisible to the human eye.

Ultra violet rays are lethal to bacteria, unicellular organisms (amoebae) and to the tissue cells of animals and plants. It is a protoplasmic poison.

The other rays possess some bactericidal powers but only on long exposures. The Blue is more active than the Yellow, and the Yellow than the Red; Green light was the poorest of all. The penetrating power of ultra-violet rays is poor so that its' action is chiefly on the surface of the body.

Ante-Natal Clinic.

Total Sessions	100
" Attendances	3339
Number of new patients	652
" " old "	2687
Average attendance	33.39
Number of Examinations by Doctor	3280
" " Wasserman Tests	611
" " Rhesus Tests(from September, 1946)	207

Maternal Deaths Nil.

Total Attendances at Clinics.

. . .	I.W.C.	T.C	D.C. (C)	D.C. (M)	Eye C.	W.Adv.	U.V.R. Infants	School Children	A.N.	Min. Ail.	Total.
1st.Quarter	697	34	3	18	7	29	160	40	749	114	1851
2nd. "	944	37	10	12	6	52	159	80	825	111	2236
3rd. "	1122	20	12	14	6	57	89	56	1045	91	2512
4th. "	1099	25	2	18	17	59	117	170	720	56	2283
	3862	116	27	62	36	197	525	346	3339	372	8882

I.W.C.= Infant Welfare Clinic. T.C.= Toddlers Clinic. D.C.= Dental Clinic(C)= Children, (M)= Mothers. Eye C. = Eye Clinic. W.Adv.= Womens Advisory Clinic. U.V.R.=Ultra Violet Ray. A.N.= Ante-Natal Clinic. Min.Ail.= Minor Ailments Clinic.

Womens Advisory Clinic.

Total Sessions	21
" Attendances	196
Number of new patients	37
Patients attending for Post-Natal treatment	12
" " " Contraceptive advice	31
" " " Gynaecological "	20
" " " Sterility	7
Return Visits	159

Maternal Mortality - Annual Report.

Year	Puerperal Sepsis		Other Puerperal Causes.				
	Deaths	Rates per 1,000 Births.	Deaths	Rates per 1,000 Births.	Total Deaths	Rates per 1,000 Births	Total Births Live & Still
1938	1	1.6	4	6.6	5	7.4	605
1939	Nil	Nil	Nil	Nil	Nil	Nil	606
1940	2	3.3	2	3.3	4	6.6	573
1941	Nil	Nil	5	7.8	5	7.8	573
1942	2	3.5	2	3.5	4	7.0	539
1943	Nil	Nil	3	4.8	3	4.8	604
1944	Nil	Nil	Nil	Nil	Nil	Nil	719
1945	Nil	Nil	2	3.2	2	3.2	627
1946	Nil	Nil	2	2.7	2	2.7	759

Babies Born in Hospital.

Particulars of those born in the Area of Blyth.

Premature Infants:-

(1) a. Total number born at home 10
b. " " " " hospital 18

(2) The number born at home.
a.Nursed entirely at home 8
b.Who died during the first 24 hours 2
c.Who survived at the end of one month 6
(2 born at home - removed to hospital, and died there after living 3½ hours.)

(3) The number of those born in Hospital.
a. Who died during the first 24 hours 3
b. Who survived at the end of 1 month 15

SUMMARY. – BIRTHS 1946. (All notifications including Maternity Homes).

	LOCALLY NOTIFIED							MATERNITY HOMES						
	Illegitimate.		Legitimate.		Total		Total Births	Illegitimate		Legitimate		Total		Total Births
MONTH	M	F	M	F	M	F		M	F	M	F	M	F	
January	–	–	9	6	9	6	15	–	–	9	9	9	9	18
February	1	3	14	14	15	17	32	–	1	9	3	9	4	13
March	3	2	14	14	17	16	33	1	–	10	9	11	9	20
April	1	1	18	19	19	20	39	–	–	12	6	12	6	18
May	3	–	27	22	30	22	52	1	1	14	19	15	20	35
June	–	–	22	22	22	22	44	–	1	10	12	10	13	23
July	–	–	11	18	11	18	29	1	–	3	13	4	13	17
August	2	–	21	20	23	20	43	–	–	12	14	12	14	26
September	1	2	25	22	26	24	50	–	–	16	13	16	13	29
October	1	1	22	18	23	19	42	–	1	8	7	8	8	16
November	4	2	21	22	25	24	49	1	–	9	16	10	16	26
December	1	–	20	21	21	21	42	–	–	16	14	16	14	30
Total M & F	17	11	224	218	241	229	470	4	4	128	135	132	139	271
Grand Totals	28		442		470		470	8		263		271		271

	ILLEGITIMATE				LEGITIMATE			
	LIVE		STILL		LIVE		STILL	
	M	F	M	F	M	F	M	F
Maternity Home Notifications	4	4	–	1	128	135	4	4
Local "	17	11	–	–	224	218	6	3
Total Births (Live and Still)	21	15	–	1	352	353	10	7
Grand Totals	36		1		705		17	

Live Births = 741
Still " = 18

NUMBER OF CONFINEMENTS TO VARIOUS HOSPITALS.

Dilston.	Mona Taylor.	Preston.	Princess Mary.	Willington Quay.	Ravensbourne Nursing Home.	Grosvenor Nurs. Home.	The Gables.	Priory Nursing Home.	Others.	TOTAL.
115	49	36	29	19	7	11	2	1	2	271

271 patients out of 741 Maternity cases confined at Maternity Homes & Hospitals = 36.5 per cent.

PREMATURE INFANTS. (REPORTED ON).

Month.	Prematurity Age.	No. in Family.	Actual Weight.	Any special milk required.	Any expert advice necessary or hospital.	Remarks.
January	6 weeks	—	—		Born at Mona Taylor	Lived 2 days.
February	2 months	3	2lbs.14ozs.		Princess Mary Maternity Hospital	Child lived 24 hours & 5 minutes. Mother Toxaemia and vomitting.
March					Born at home.	Lived 3 weeks.
"	4 weeks	1	5lbs. 1oz.	Own	Willington Quay Maternity Home.	
"	1 month	5	5lbs. 2ozs.	—	Princess Mary Maternity Hospital	Breast Fed. Thriving
"	10 weeks		2lbs. 8ozs.		Princess Mary Maternity Hospital	Lived a few minutes.
May	1 month	6	6lbs, 7ozs.	On N.D.M.	Gables Maternity Home	Thriving.
"	" "	3	5lbs. 8ozs.	On Ostermilk No.1.	At home.	"
June	" "		5¼lbs.		Mona Taylor Maternity Home.	Jaundiced.
"						
"	" "		4lbs. 3ozs.		Preston Maternity Home	
"	" "		(twins) 6lbs. 2ozs.&6lbs.5ozs.		At home.	
"			4lbs.		Mona Taylor Maternity Home	
"	40 weeks		5lbs. 7ozs.		Willington Quay "	On discharge 5lbs.10oz
"	2 months	7			At home.	Died after 12 hours
July	6 weeks (twins)	3	4lbs.11ozs. 3lbs.15ozs.		Dilston Maternity Home.	Very feeble child. One lived 3 days
"	1 month	3	5lbs. 5½ozs½	On Trufood	Princess Mary Maternity Hospital.	Died after 5 weeks. Congenital Mental Deficiency.
August	28weeks(twins)		3lbs. each		Preston Maternity Home	Died after 3½hours
September	8 weeks	7	4lbs, 6ozs.		Princess Mary Maternity Hospital.	Healthy Baby.
"	2 months		3lbs.		Born at home.	Lived 12 hours.
October	8 weeks	2	6lbs.12ozs.		" " "	Congenital Heart. Lived 4 days.
"	8 months(twins)	4	4lbs.&3lbs. 3ozs.	On Ostermilk No.1.	Mona Taylor Maternity Home. Born 28.10.46.	Normal Babies.
November	4 weeks	3	6lbs. 2ozs.		Willington Quay Maternity Home.	Weak Baby.
"	1 week	3	4lbs.13ozs.	Ostermilk No.1	Dilston Mat. Home.	Normal small baby
December	4 weeks	4	4lbs.14ozs.		" " "	Healthy Baby.

STILL - BIRTHS.

In England and Wales each year there are about 20,000 Still-Births, 18,000 Neo-Natal deaths (i.e. of infants under four weeks of age), and 15,00 deaths of infants from four weeks to one year. This total represents a great waste of life and all localities through their clinics, etc., must endeavour to reduce it. (The term "still-birth" is applied to any child born from it's mother after the twenty-eighth week of pregnancy and which did not show any signs of life or did not breathe). In 1939 the Still-Birth rate in England was 37 per 1,000 total births. The "Still-Birth" does not increase with increasing density as does infantile Mortality. The cause acting on the child whilst unborn will, if it has not killed the child, might still act as a continuing factor as the cause of it's Neo-Natal death. In this respect the two are related. In order of causes we have difficulties in Labour, Prematurity, ill-defined causes, deformities, Toxaemia, diseases of Mother, etc. Primiparae have a higher Still-Birth rate than women who have borne more than one child. Ante-Natal care and the improvement in health from priorities for milk, eggs, and vitamins, have done much in reduction - still there is much to achieve. It is estimated that the Still-Birth rate of the ninth pregnancy is twice that of a first pregnancy and more than three-and-a-half-times of a second pregnancy.

It has been found that women who get an attack of German Measles during the first four months of their pregnancy are greatly liable to have a child born of some deformity or complication or a "Still-Birth".

NEO - NATAL DEATHS.

Fatal outbreaks of Neo-Natal diarrhoea have broken out in some Maternity Homes and elsewhere. The causes of diarrhoea so far known have been (1) food poisoning (2) bacterial dysenteries - with (1) and (2) being also in adults; (3) mild diarrhoea in bottle-fed infants (sometimes fatal), (4) true epidemic Neo-Natal diarrhoea. Some bacterial infection or toxin introduced is the usual cause but in these outbreaks the definite causa causans has not been determined. The great necessity for the strictest hygiene of persons, clothes, nappies, wards, can again be emphasised, together with the sterilisation of all apparatus used in injections, etc., The question whether Toxaemia in mothers can produce these results requires some consideration.

"LIVE" AND "STILL" BIRTHS.

Every child born alive must be registered within 42 days primarily by the parents, or in default by some one present at the birth. Similarly every "stillbirth" must be registered and at same time the registrar must be handed a certificate of a doctor or midwife that the child was not born alive, or sign a statutory declaration. It is unlawful to bury a "stillborn" child without the sanction of the coroner or registrar. A "stillborn" is any child issued from its mother after the twenty-eighth week of pregnancy and which did not breathe or show any sign of life. Therefore a foetus born dead before the twenty-ninth week need not be registered. To be "born alive" the child must be (1) fully extruded and (2) achieved an independent existence. It is not necessary that it should have breathed or that the cord should have been cut - but it must have shown some signs of active existence of life. By the Infant Life Protection Act 1920 and the Registration Acts a child is only capable of being born alive after the 28th. week. This does not exclude evidence of life in a foetus at an earlier age.

TOXAEMIA CASES AMONG MATERNITY CASES.

Period - 28/2/46 to 7/11/46.

No. of Cases.	Toxaemia.	Complications.	Days in Hospital.
February. - 1	1	Hydramnios.	28
March. - 3	1		11. 22. 31.
April. - 4	4	1. Forceps 1. Mother Anaemic 1. Still-Birth.	11. 11. 17. 16.
May. - 3	-	1. Post-partum Eclampsia 1. Pyrexia	12. 11. 34.
August. - 3	3	Nil.	23. 14. 19.
September - 2	2	Nil.	10. 27.
October. - 1	1	Still-birth. Caeserian.	37.
November. - 1	1		14.
TOTALS: 18	12	7	

None of the above Babies had Jaundice.

18 Toxaemia Cases out of 84 confinements sent to Dilston in above period. This gives 1.8 per cent.-

PREMATURE BABIES.

Period lived.

Total 24 cases with 27 infants. (3 cases of twins).

Still-Born.	Few Minutes	3½ Hours	12 Hours	24 Hours	2 Days	3 Days	4 Days	3 Weeks.
3	1 (a twin)	2 (twins)	1	1	1	1 (a twin	1	1 (a twin)

5 Weeks	3 Months.
1	1

Total .9 deaths within 1 month- 33.3% of 27 infants

2 "in 5 weeks to 3 months - 7.4% of 27 infants

Total 11 deaths in 1 month to 3 months. 40.7% of 27 infants

Transferable Deaths for Quarter ended 31st. Dec. 1946.

	0 - 1		10-15		15-25		25-35		35-45		45-55		55-65		65-75		Over 75	
Causes of Death	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brain Disease	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-
Heart "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2	2
Liver "	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Kidney "	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Pneumonia	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-
Adrenal Tumor	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetanus	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gen. Paralysis of the Insane.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Haem. after Abortion	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Totals	3	-	1	-	-	-	-	1	1	1	2	1	-	2	2	2	3	2

Total Deaths = 21

BLOOD PRESSURE IN PREGNANCY.

The Ausculatory Method of taking blood pressure gives the pressure when the heart is pumping out the blood (the Systolic pressure) which registers the maximum pressure and also the pressure when the heart is at rest (the diastolic pressure) which shows the capability of the heart. Many people seem to be obsessed with the high blood pressure and do not give significance to the diastolic pressure which shows how the heart reacts to the increased tension. In fact the particular value of this method of estimation is in it being a reliable method of estimating the diastolic pressure. In this method a band is put round the arm and it is connected with a mercury (or air) manometer and a stethoscope, preferably of the phonendoscope variety. Failure to get a correct reading can arise from many cuases. Thus: (1) Position of the armlet - ½ an inch can give a different register (2) Where the centre of the bag is put (3) Accurately determining the position of the artery at the biceps tendon (4) Kind of stethoscope (5) Any pressure applied to the artery by the stethoscope (6) Distraction of the listener (examiner) (7) The proper appreciation of the sounds of the five phases (8) The noting of the special points at which these phases end (9) Blood volume. The whole value of the method depends upon the accurate determination of point 4 which represents the diastolic pressure (i.e. when silence begins). If any other point is taken the whole value and object of the method is vitiated. If medical men can differ as to the pressures then one must not be surprised at midwives. Competent observers can record different pressures on the same patient at the same time. The instrument at times requires testing against a standard one. Blood pressure represents resistance in some way to the blood. A gravid uterus must at times occasion resistance and a temporary rise of blood pressure is not pathological. Pressures above the mean are not necessarily pathological. "The diastolic pressure is the best simple index of mean pressure". (Rolleston & Moncrieff). It is the effective minimum pressure which is important for the work of the heart. A high minimum means extra heart work and so leading ultimately to enlargement of the heart. Pregnancy has an unfavourable effect on kidney disease. High blood pressure during the last three months of pregnancy may cause a risk of convulsions. You can have high blood pressure without arteriosclerosis; and arteriosclerosis without high blood pressure. In early stages of hogh blood pressure the person may feel well and look healthy. Urine testing is essential to discriminate kidney affection. A monograph by Bechgaard deals with a study of over 1,000 cases of hypertension. By this term he means a blood pressure of not less than 169/90 - the average was 190/110 taken after 15 minutes rest. Mortality was not influenced by obesity, or the height of the blood pressure provided it was below 200/130 in men and 220/130 in women. He defines normal blood pressure as being 140/90mm. In this country a blood pressure in people over 50 years is regarded as hypertonic if it is 170/105. Latest instrument (Tonoscillograph) gives in 2 or 3 minutes a permanent graph.

The normal for a man is roughly 100 plus half his age. In women it is usually 10-15mm mercury lower. In this country a systolic pressure over 150 or 150 mm is regarded as abnormal at any age, but its significance depends on other factors. The diastolic is generally 2/3rds. of the systolic up to middle age, and half the systolic after that.

I have gone through some of the blood pressures taken during 1946 by the midwives and summarise the results.

Of 96 cases where blood pressures were taken on two or more occasions there were only 16 cases which had at any time on one or more occasions a blood pressure of 140 or over. This represents 16.6%. In none were there any abnormalities. The total occasions blood pressures were taken in this unselected group was 435 or an average of 4.5 occasions per case. Most of the blood pressures were in normal ranges.

THE BLOOD GROUP Rh. FACTOR.

To understand what the discovery of the Rh. Factor in the blood means in simple language, I must summarise briefly the knowledge of blood groups in general. All persons belong to one of four main groups, (there are subgroups as well). These are known as A,B, AB, and O, and generally referred to as the ABO Group. The blood of a person (a donor), is injected into another person's blood (recipient), and if the injected blood is of a different group dangerous symptoms can arise, (as breakage of the red blood cells and their solution - haemolysis as it is called). All soluble foreign protein substances (red blood corpuscles, blood serum,animal venoms, etc.) i.e. foreign to the particular subject, may act as an Antigen. An Antigen is a special constituent or product of the body which incites immune bodies or antibodies which act adversely on the homologous organism or neutralise it's poison. A serum for example, which contains antibodies antagonistic to a certain germ (bacteria), is called antibacterial serum, and one which neutralises it's toxin is known as antitoxic serum (as used in Diphtheria). Sometimes the injection of a proteid leads to what is called a Specific Sensitising effect so that when a second dose of the serum is injected, even after a short interval a sudden illness known as Anaphylactic Shock is developed. It was found that pregnant women or those who had recently been confined occasionally, on their first blood transfusion had serious reactions. In 1940 the explanation was found in the discovery of the Rh. factor (by Landsteiner and Weiner). They found that when rabbits or guinea pigs had blood injected into them from the Rhesus Monkeys that antibodies developed which reacted not only with the red cells of those monkeys, but also with the cells of 85% of the white population. Such persons were thus called Rh. Positive, and the remaining 15% were Rh. Negative. This discovery was applied by other workers for an explanation of the irregular actions where a Rh. Negative woman reacted irregularly while transfused with Rh. Positive blood. They explained it as the Rh. factor of the transfused blood acted as an antigen and brought about iso-immunisation of the Rh. Negative recipients. A similar explanation was given of some foetal abnormalities (Rh. groups), congenital anaemia, and breakage of blood cells of infants (Erythoblastosis) as being caused by the action of Rh. antibodies. Later it was found that 90% of mothers of infants who had Haemolytic diseases were Rh. Negative and the infants Rh. Positive. Further studies of families showed that the Rh. factor is inherited. (As in the case of the blood groups so with the Rh. factor there were sub-types - 3 each for Positive or Negative Rh. factors.) In each individual the Rh. factor consists of two sets of three elementary antigens, and so a recipient on transfusion might be expected to develop antibodies against one of the antigens which be lacking. On the first occasion when a Rh. Negative individual receives Rh. Positive blood the cells of the donor might live in the recipient's blood without causing any reaction. In others on the first and other occasions of transfused blood severe reactions occur (headaches, rigors, janudice, blood in the urine, etc.,). These result from iso-immunisation of the Rh. Negative recipient by the antigens of the Rh. Positive blood, and Rh. antibodies are present in the Serum. Once sensitisation has been established it seems to be permanent on the recipient's constitution, and so a transfusion after many years can be followed by serious results. It has even been asserted (Diamond 1945); that sensitisation of the Rh. Negative woman by transfusion of Rh. Positive blood leads to the most severe forms of haemolytic disease in subsequent pregnancies. Cappell,(1944), emphasises that females in or below reproductive period should be transfused only by Rh. types similar to their own, and without regard to this factor it is dangerous.

Approximately one marriage in eight involves a Rh. Positive man with a Rh. Negative woman, and in about one pregnancy in ten the foetus is Rh. Positive and the mother Rh. Negative. Sensitisation however, occurs in about one in twenty-five which means that haemolytic diseases would arise in about one in 250 births. Thus Rh. incompatibility is the most important genetic cause of foetal deaths. The harmful antibodies pass through the Placenta ("after-birth"), and cause damage to the blood forming system of the infant. These antibodies are mainly associated with "clumping" of the cells or their breakage and solution of them.

At birth the appearance of the child cannot be taken as a guide as to it being affected or not. Jaundice is not the rule as the excess of bilirubin (from the destroyed cells), passes into the placenta and is removed by the mother's circulation. If affected the umbilical cord may look yellow. Early signs are discoloration of the skin and mucous membranes (such of lips and gums), as also haemorrhages into the skin. There should be no delay in finding the correct diagnosis. A sample of blood is taken from the maternal end of the umbilical cord into a sterile bottle with an anti-coagulant (preferably heparin). It is centrifugalised, and if the infant is affected the super-natal fluid is found highly jaundiced. (There must be no mixture of Wharton's Jelly from the cord or with any of the mother's blood). With history of a previous diseased child, give a transfusion. When jaundice appears within a few hours of birth then Haemolytic disease can be suspected - but it may be delayed for 48 hours. (Physiological Jaundice rarely occurs before 48 Hours). Suspicious signs are, rapidly deepening Jaundice, with drowsiness and difficulty in feeding. In such a case the child should be sent to hospital for diagnosis and treatment. With the child 10ml of the mother's blood should be sent so as to decide the type of blood to be transfused. (A normal blood of a child of 7lbs. (3.175 Kg) is 250ml. The amount transfused should be given up to 150ml. which amount is equal to three litres in an adult). 120 - 150 Ml. of Rh. Negative blood should be early transfused of the child's blood or Group O blood. When the disease is anticipated the cord should be clamped at the earliest to prevent reflux of Placental blood. If the infant's blood (of a Heterozygous father), shows it to be Rh. Negative no treatment usually is necessary. If Anti-Rh. agglutins are present in the mother's blood they will be in the milk also. The milk can be drawn off, heated to destroy the agglutins, and given to the child.

After the first recognition of Haemolytic disease in a family the father's blood should be examined to find out if he is Homozygous or Heterozygous to the Rh. factor. If Homozygous then the prognosis is bad as a large number of these pregnancies terminate in miscarriage, premature birth, or macerated foetus. In 10% of cases of Haemolytic disease the mother is Rh. Positive. For the affected children the mother's blood is taken as the guide. Mothers' whole blood must not be used but the red cells can be used after centrifuging and washing with saline, or a supply of matched blood received from the Blood Bank of a Transfusion Depot.

Rhesus Blood Testings - Number Taken.

Period - 28th. September - 31st. December, 1946

Females.		Males.	Total.		Grand Total.
1st. Test.	2nd. Test.		Males.	Females.	Males & Females.
109	5	23	23	114	137

Females.		Males.		Total. Neg.& Pos.	
Negative.	Positive.	Negative.	Positive	F.	M.
23	86	5	18	109	23

The Blood Testings are taken by Health Visitors (2) alternatively at the clinics - 2 clinics per week.

The 5 second testings taken at the eighth month of pregnancy proved to contain no Rhesus antibodies.

PAINLESS MIDWIFERY - VIEWS OF 90 MOTHERS.

I have enquired of a number of mothers their opinion on this subject which I give below.

Result of Questionnaire to Mothers'.

Number of Confinements.		1st.	2nd.	3rd.	4th.	5th.	6th.or over.	Totals.	%
Question No.1. Was your confinement normal?	Yes :	39	21	8	2	2	2	74	82.2%
	No :	13	-	2	1	-	-	16	17.7%
Question No.2. Did you have anything to relieve pain apart from Chloroform?	Yes :	21	6	3*	-	1	1	35	38.8%
	No :	31	11	3(1 no reply).	3	1	1	50	55.5%
Question No.3. Did you think you should have had chloroform or some relief?	Yes ::	25	8	8	1	1	1	44	48.8%
	No :	21(2 no reply).	7(2 no reply).	3(1 no reply.	2	1	1	35	36.4%
Question No.4. Did you want Chloroform?	Yes :	18	2	4	-	1	-	25	27.7%
	No :	29(4 no reply).	14(1 no reply).	7(1 no reply).	3	1	2	56	62.2%
Question No.5. Did you have Chloroform?	Yes :	13	-	6	1	-	-	20	22.2%
	No :	38	17	6	1	2	2	66	73.3%
QuestionNo.6. Judging by your experience of a first confinement would you have chloroform.	Yes :	32	5	11	2	1	1(1:)	52	57.7%
	No :	16(2 no reply).	10X (2 no reply).	3	1xx	1	1	32	35.5%

: - Some relief not necessarily Chloroform.
* - 2 had Twilight Sleep.
Some relief other than Chloroform.(1 Twilight.)
X - Think every mother should have some relief.
xx - Natural birth preferred.

Remarks made :-A second confinement case had experience of both chloroform and Gas-oxygen - prefers latter, A fifth confinement case considers every woman for her first case should have chloroform. The term abnormal includes instrumental deliveries.

Of 74 normal cases 44 (59.4%) wanted some relief. Of these (74) 39 (43.3%) were first pregnancy cases of whom 25 (64.1%) wanted some relief and of these 18 would have wanted chloroform. Of them also 32 would like chloroform in any future confinement. Of 21 second pregnancy cases 8 even wanted some relief. Of 8 third pregnancy cases 8 wanted some relief. Of 6 among 4th. to 6th. pregnancy cases 3 wanted some relief.

Of 90 cases 35 (38.8%) had some relief including 16 abnormal cases, and 35 (38.8%) did not want nor in the future any relief. One definitely prefers natural labour.

Thus two-thirds of the first cases wished some relief of pain. Of all the others 42.8% desired some relief also.

PAINLESS MIDWIFERY.

Relief of pain (Analgesia) during labour can be obtained by some drugs (e.g. Chloral, Paraldehyde, Bromides, etc.), according to the case. It may be obtained by certain inhalents. Thus:-

1. (a) Chloroform either in capsules which the patient can break and inhale from, or put on a cloth, as each pain comes on. (b) By the Medical attendant (or nurse in attendance with them) putting some on a cloth to inhale at such times. I have used either on the greater number of 5,000 cases. The capsules (each of 20 drops) cost 2/- for twelve.
2. The minnet apparatus with nitrous oxide (and oxygen). This apparatus can be used by midwives under certain conditions (of the C.M.B.). It requires co-operation of the patient and before this can be absolutely secured the patient requires some ante-natal tuition as to what she should do in the three stages of labour. Hysterical patients are non-co-operative. Again the use of this gas and air mixture is contradictive in Heart disease or Heart affections or complaints and where there is high blood pressure.
3. Trichlorethylene is akin to chloroform and both the liquid and its' vapour are not inflammable (like ether). It is "safer than chloroform but provides more Analgesia." (Hewer). Certain conditions have to be known. A purified form Trilene (coloured blue) is now available and has been found very useful for this special purpose and is cheap. It can be used with a clever inhaler without the bag and can be used by the patient. One ounce will last 3 to 5 hours and costs only sixpence.

It is not every woman who wants an Analgesic. Where need and desire exist most doctors will meet them. With shortage of staff for observation there may be at times a little difficulty.

The passage of an anaesthetic from the ultimate cells of the lungs to the blood is physical i.e. it depends upon the laws of diffusion of gases. The diffusion goes on until the partial pressure of the gas on each side of the lining membrane is equal. The total blood of a normal person at rest passes through the lungs once every half minute. The more lipoid anaesthetic is carried by the red cells of the blood whilst the water-soluble ones are conveyed by plasma of the blood.

Carbonic acid is the natural stimulant to the respiratory centre in the base of the brain. You can increase respiration by adding up to 5% carbonic acid gas to the inspired air or to oxygen, but an addition to a greater extent than 10% will cause cessation of respiration even with oxygen. Again oxygen by itself is capable of producing loss of consciousness. Artificial respiration is used to overcome the lack of oxygen in the blood but if this carried out to excess so as to seriously reduce the carbonic acid necessary then the oxygen clings to the Haemoglobin and there is lack of oxygen to the tissues so that death can be produced by excessive artificial respiration.

CHILDBEARING SURVEY.

Extracts from the survey undertaken by the Royal College of Obstetricians and Gynaecologists.

	Professional Group.	Black coated Workers.	Manual Workers.
According to employment	6%	10%	65%
A fourth or higher number of pregnancy.	1 in 20	1 in 10	1 in 4
In population density of two or more for every bedroom and kitchen.	1 in 20	1 in 10	1 in 4
Ante-Natal care from	3rd.month	4th.month	4th.month
Delivered by Specialist	1 in 10	1 in 50	1 in 50
Home Delivery	1 in 5	1 in 3	1 in 2
Nursing Home	1 in 3	1 in 17	1 in 17.

ANTE-NATAL CLINIC.

1946.	New Patients	Re-Visits	Consult.	1946.	New Patients	Re-Visits	Consult.
Jan.	64	234	297	July	52	279	331
Feb.	65	168	232	Aug.	52	285	333
Mar.	61	177	238	Sep.	69	308	376
Apr.	43	246	278	Oct.	56	182	237
May.	48	261	309	Nov.	49	176	222
June	47	179	224	Dec.	43	224	244

Totals:	New Patients.	Re-Visits.	Consult.
	649	2719	3321

100 Sessions in the year - average of 33 per session.

POST-NATAL CLINIC. (Dr. Dorothea W. Sinton).

Total Sessions	21
Total Attendances	196
New Patients	37
Return Visits	159

Analysis of attendances.

Gynaecological	20
Post-natal	12
Sterility	7
Contraception	31

SCABIES 1946.

School Children.

Number of Baths	242
" " Dressings	121
" " Examinations by Medical officer	137
" " New Patients	80
" " Recurrances	1
" " Old Patients Continuing	0
" " Adult Contacts	81
" " " " treated	3
" " Cases referred by own Doctor	5

SCABIES.

Maternity & Child Welfare.

Number of Baths	6
" " Dressings	0
" " Examinations by Medical Officer	5
" " New Patients	4
" " Recurrances	0
" " Old Patients Continuing	0
" " Contacts	4

SCHEDULE OF TEMPORARY HOUSES COMPLETED AND IN PROGRESS ON 31st.DECEMBER, 1946.

LOCATION	TYPE	COMPLETED	IN PROGRESS
South Farm Estate, (Housing 2A, 2B, 2C). 3,5,7,9,11,13 Fifteenth Avenue.	Tarran Pre-fab 2 Bedrooms.	6	
91,93,95,97,99 Sixth 100,102,104, Avenue. 106,107.	do.	10	
16,18,20,22,24 Eighteenth 26,28,30,32,34 Avenue.	do.	10	
28,30,32,34,36,38,40, 25,27,29,31,33,35,37, 39,41,43,45, Second Avenue.	do.	18	
Newsham (Housing 3). 2,4,6,8,10,12,14 Links 16,18,28,30,32, View. 34.	Aluminium Pre-fab. 2 Bedrooms	13	
Remainder of Site.			36
North Farm. (Housing 1).	Aluminium Pre-fab. 2 Bedrooms.		57
	TOTALS:	57	93

SCHEDULE OF PERMANENT HOUSES COMPLETED AND IN PROGRESS ON 31st.DECEMBER, 1946.

LOCATION	TYPE	COMPLETED	IN PROGRESS
South View (Housing 21A). 1,3,5,7,9,11,13,) 15,17,19,21,23,)South 10,12,14,16,18,)View. 20,28,30,32,34,)	Permanent 3 Bedrooms.	22	
22,24,26 South View.	3 Bedrooms.		3
8,9,10 West Drive.	2 "		1
	4 "		2
North Farm. (Housing 19). First Portion (A)	Permanent 1 Bedroom (Bung.)		2
	2 "		10
	3 "		23
	4 "		9
	5 "		2
Second Portion (B).	Permanent. 1 Bedroom (Bung.)		4
	2 "		2
	3 "		42
	4 "		4
Newsham Road. (Housing 22.)	Permanent. 1 Bedroom (Bung.)		2
	2 "		12
	3 "		51
	4 "		8
	B.I.S.F. (Perm. Pre-fab.) 3 Bedrooms		72
	TOTALS:	22	254

SLUM CLEARANCE AREAS.

		Population.	
1. Cowpen Colliery	X	540	
2. " Square	X	277	
3. " Row	X	132	
4. North Row - Isabella Pit		45	
5. South Newsham		278	- Total 1272.

All the above Areas consist of property belonging to the Cowpen Coal Company, Ltd.,

6. Quayside Areas 1 - 10		710	
7. East Regent Street Areas 1 - 5	X	536	
8. Wykeham Terrace Area		15	

Areas No's 1 - 8 Scheduled November, 1937.

9. Bebside Areas 1 - 10	1181	
10. Cowpen Areas 1 - 3	103	- Total 2545

Grand Total: 3817. - Total Population involved by Survey at that time.

Areas No's 9 and 10 Scheduled 1938.

X denotes Applicants interviewed.

Note: Phoenix Street Area is ready for Schedule.

PHOENIX STREET AREA.

I have submitted two reports on this. The area was surveyed in 1939 for slum clearance and at that time there were 108 houses. At present there are roughly 96 buildings occupied by a population of about 325. A house may be occupied by letting to 2, 3, or 4 families. The conditions of all are damp and 70% of the houses have more than three various minimum conditions of repairs. Nearly all are beyond habitable, many are overcrowded and some have tuberculosis cases. The whole area calls for immediate treatment by slum clearance or purchase of the 96 buildings by loan and rebuilding house by house on each demolished site. Either can be done under the Housing Act on representation to the Minister of Health and I recommend this should be done, and am sure it will have sympathy as the conditions are vile and intolerable both to the people concerned as well as for the general public health.

THE WHITE PAPER OF THE HOUSING PROGRAMME FOR 1947 ISSUED BY THE MINISTRY OF HEALTH. (EXTRACT).

Zonal Conferences. In most districts not all the building labour employed is local, and it is therefore not possible to consider one district apart from its neighbours. Zonal conferences have already been arranged, in order to collate full information on building schemes and to enable representatives of the Government Departments concerned and of the local authorities to act in concert in determining what ranges of building work of all kinds can be undertaken with the available labour.

In pursuing, therefore, the housing programme for 1947, the following procedure will be adopted:-

(1) A conference for each zone will be held at some time within the next two or three months;

(2) Before or at each conference, the local authorities concerned will have before them the whole of the available information as to building commitments and building resources for the zone;

(3) The best possible estimate will be made at the conference as to the total number of houses which can be completed in each district during the year. This estimate will include both traditional and non-traditional houses to be built by the local authorities, and houses to be built by other bodies (including houses to be built by private builders under licence, houses to be built by Housing Associations, and, in districts where such schemes are in hand, houses to be built by Government departments). Soon a schedule will be issued.

SANITARY DEPARTMENT.
REGISTER OF COMPLAINTS - 1946.

Month.	Dustbins.	Drains & Sinks.	House-Defects.	W. C.	Rats.	Water turned off.	Food Inspected.	Gutters.	Various.	TOTAL.	REMARKS.
Jan.	6	6	10	4	2	8	10	–	18	64	
Feb.	–	8	32	2	3	20	16	5	18	104	
Mar.	4	10	18	3	3	7	11	–	18	74	
Apr.	4	15	21	1	2	14	9	–	23	89	
May	21	12	30	3	1	2	13	–	14	96	
June	2	6	19	2	3	3	24	–	17	76	
July	15	13	19	–	2	2	35	1	44	131	
August	–	6	28	–	1	1	30	–	18	84	
Sept.	1	8	35	1	2	4	10	–	13	74	
Oct.	44	4	18	1	1	2	22	5	20	117	
Nov.	–	2	47	–	7	1	13	2	5	77	
Dec.	–	6	16	–	5	2	11	2	6	48	
TOTALS:	97	96	293	17	32	66	204	15	214	1,034	

SUMMARY OF SANITARY WORK.	1946	1945	1944
Total of Informal Notices issued:	531	789	652
" " Statutory " "	176	429	307
Number of Milk Samples Taken:	204	178	288
" " Water " "	42	30	37
" " Carcasses Inspected:	8316	7190	6788
" " " Destroyed:	10	4	5

POSTAGE EXPENDITURE.- 1946			
Medical Official of Health:	£29.	7.	11½
Sanitary Inspector:	5.	13.	3.
Blood specimens:	2.	15.	2.
Swabs:	1.	12.	0½
TOTAL:	£39.	8.	5.

Work of Mr. Pringle from 1st. May,1946 - 31st.December,1946.

. of Cats destroyed	28
" " Dogs "	19
Visits re Rat infestation in houses 1st.June /46 to 31st.DEC/46	93
Visits re Bugs from March/46 to Dec/46.	55
Visits re disinfection of bedding (other than Infectious Diseases during the year 1946).	49
Visits re Infectious Diseases	309
Visits re taking Samples of Milk to Newburn	22

Details of work done under Infestation Order 1943.Period Jan.1st.-Apr.27th.1946.

Prebaits laid.	2250
Poison baits laid.	1793
Traps baited.	120
Bodies recovered.	302
Rats killed.	1816
Mice killed.	192
Number of visits.	490.

THE HIGH TEMPERATURE SHORT - TIME PROCESS OF PASTEURISATION.

This method (now in Blyth) has been recognised by the Ministry of Health under the Milk (Special Designation) Regulations, 1941. The employment of this short-time method is conditional to (a) the milk being retained at a temperature of not less than 162°F. for at least 15 seconds; (b) that the apparatus is fitted with full thermostatic controls, and (c) that a suitable device is provided to divert the flow of any milk which has not been properly 'held'.

From the Public Health standpoint this process has been found, both in this country and in America, to kill all Pathogenic (disease-producing) organisms likely to be found in milk at a temperature of 160° F for 15 seconds. (It will be noted the Regulations give 2° F more for added safety). The great test of the efficiency of all pasteurisation processes is the destruction of the Enzyme Phosphatase in milk, and this process has been proved by the Phosphatase test to destroy this Enzyme. It is also important that the process should not destroy the nutritive value of milk and reports show that no alteration occurs. The cream line will not be damaged provided the process is carefully worked within the laid down limits of temperature. (Higher temperatures will destroy it). It is imperative that the first flow of partially pasteurised milk should be drawn off before it reaches the cooling section. Efficient cleansing and sterilisation of the plant is necessary. Thermoduric (heat resisting) organisms are not killed and they depend upon the degree of bacterial contamination of the raw milk (from imperfect utensil cleansing at farms, etc.). Several types of the short-time process exist. The prime essentials of any type are (1) adequate heating surface (2) correct milk-to-water circulation ratio (3) sensitive thermometers (4) controlling devices.

The conditions of the regulations are:

(a) Milk to be retained at not less than 162° F for at least 15 seconds, and immediately cooled to not more than 55° F; and
(b) Indicating thermometers and recording thermometers be used during the whole of the pasteurising process, apparatus shall be thermostatically controlled, be provided with a device to automatically divert the flow of milk which has not been retained at the required temperature and time.

The type of apparatus, thermometers used and methods employed shall be satisfactory to the licensing authority. Thus the milk must have a primary heating to at least 163° F.

There are several types of short-time pasteurisers which need not be gone into here. It is however most important to note two special devices for the efficient working. The first is the Flow Controller to have a constant flow of milk. It is fitted into the pipe line and as the flow increases it operates a button which restricts the flow. The second is the flow diversion valve which directs back into the pipe-line any milk leaving the holder which is insufficiently heated. A blue light remains over the temperature recorder on normal working, but if the temperature fails a red light appears with a warning bell which indicates that the flow has been diverted. With an automatic control the person in charge cannot re-set the valve till the requisite temperature has existed for 20 seconds. For efficiency great care is needed in cleansing, repair of gaskets, perfect working of controls, constant hot water for heating the milk, a milk temperature recorder and controller, thermometers frequently examined (increase of temperature can damage the milk).

MILK TESTS AND H.T.S.T.

Phosphatase Test: Only demonstrates approximately whether the time-temperature formula has been properly carried through.

H.T.S.T. Permitted under Provisional Milk (Special Designations) Regulations July 1941 which provided for an exposure at 162°F for 15 seconds.

There is as yet no H.T.S.T. plant available providing a positive holding period.
The onus of securing the provision of efficient plants in pasteurising depots still rests upon the Local Authority. It is for them to decide whether installations, methods, tests etc, are satisfactory.

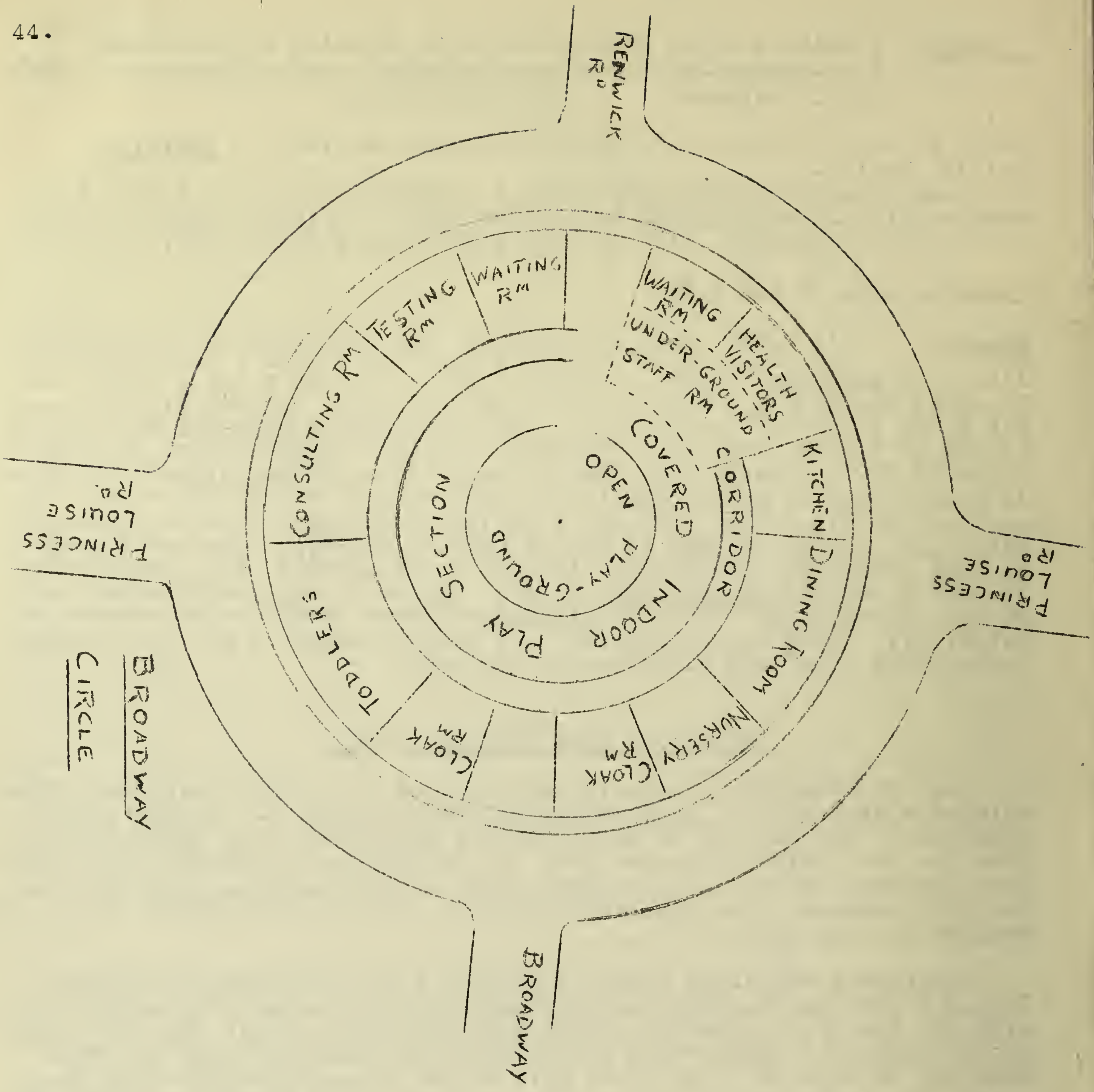
Disadvantages of H.T.S.T.

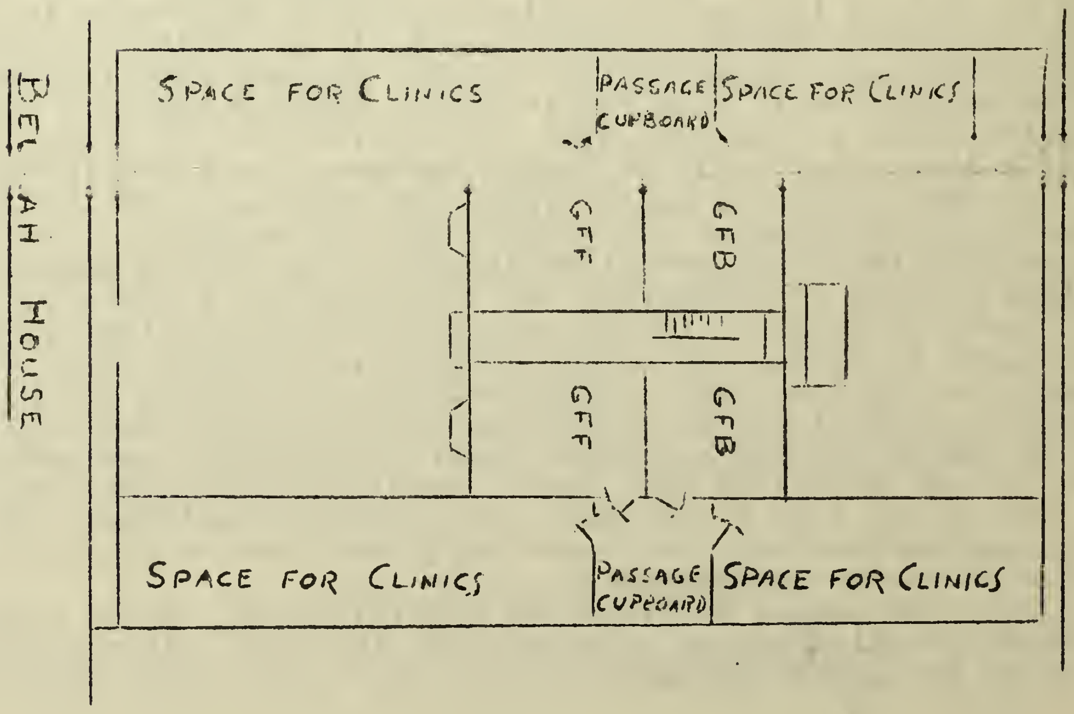
Enzymes of milk: For their preservation low temperatures are essential. Above low temperatures holding limits (145° to 150° F) the enzymes, like some proteins, become denatured and lose their special properties. The most favourable temperature for the action of anzymes lies between 95o F and 149°F (35° and 65° C). The bactericidal agencies in milk are killed at temperatures above 158°F (70°C), but remain active at 140° to 145°F (60° to 62.7° C). The enzyme known as "Phosphatase" is destroyed in pasteurisation for 30 minutes at 145° to 150° F (62.7°F to 65.5°C). Amylase and Lipase are rendered inactive at somewhat lower temperature but remain active at 140° to 143° F (60° to 61.6°C). Why use a temperature destroying any enzymes if they are valuable? At present 145° to 150° F are the limits laid down by the milk designation order for 30 minutes exposure (or 162°F without an upper limit for 15 seconds in H.T.S.T.). Cream rise is quicker and more definite at low pasteurising temperature than with higher or in raw milk.

METHYLENE BLUE REDUCTION TEST.

It was found that Bacteria were capable of reducing Methylene Blue which was operative in milk devoid of natural Enzymes. Jensen's conclusions on the Enzymes of Milk was that Peroxidase come exclusively from the cow itself, Catalase from the Leucocytes but chiefly from micro-organisms, others entirely from these latter and some entirely from the fat globules. The fat globules have a protein envelope to which its' enzymes are attached.

Different organisms reduce Methylene Blue with varying rapidity. It was found that Bacteria used up oxygen in the milk. The better the milk the longer it takes to reduce the dye, but in order that the cream and organisms be more evenly distributed the reduction test has been modified so that the test tubes have to be inverted at half-hour intervals. THe influence of fat is shown in that a fat content of under 2% failed to reduce the dye in 4 hours, while cream with a fat content of 18% reduced it in under one hour. Methylene Blue gives a weaker tint in the presence of fat than in its absence. Consequently complete visual reduction of the dye is reached earlier in a milk containing fat than in skim milk. Fat also adsorbs the dye leading to an earlier reduction time. Fat presents a larger surface for the enzymes reactions to take place. The conclusion is that fat in raw or pasteurised milk shortens the reduction time. At the same time it requires more organisms in pasteurised milk than in raw milk to reduce the dye. In raw milk organisms " clump" together whilst in pasteurised milk they are distributed so that plate counts of one against the other cannot be compared. Increase of temperature diminishes the amount of dissolved oxygen and accelerates the chemical process of reduction. We shall have to see how our tests in this respect work out on the High-Temperature-Short-time process being installed in Blyth. Imperfect cooling is a source of high bacterial count, and an excellent pasteurised milk may become subsequently contaminated. Sour milk will reduce the dye. Sunlight oxidises unsaturated fats and so reduces Methylene Blue. Neither raw nor pasteurised milk ever reduces Methylene Blue under aerobic conditions in the absence of germs and so the test is an index of bacterial activity. The inability of pasteurised milk to reduce Methylene Blue is probably due to the absence of active phosphatase.
Acidity test: The normal is 0.16% and mastitis will greatly reduce this. Milk of cows with high solids non-fat will give 0.2%. If over 0.22% the milk is unfit for pasteurisation.


Renwick Rd
Princess Louise Rd.
Princess Louise Rd
Broadway
Broadway Circle
Waiting Rm
Testing Rm
Consulting Rm
Toddlers
Cloak Rm
Cloak Rm
Nursery
Dining Room
Kitchen
Corridor
Health Visitors
Waiting Rm
Under-Ground Staff Rm
Covered
Open Play-Ground
Indoor Play Section


Bel Ah House
Space for Clinics
Passage Cupboard
Space for Clinics
GFF
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